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PREFACE

By WILLIAM E. CHANCELLOR, A.M.,

SUPERINTENDENT OF SCHOOLS, BLOOMFIELD, N.J.

ARITHMETIC is an essential element in every stage of human progress. Though there may be a difference of opinion as to how much of it is essential or desirable, the subject must hold its position as one of the two constants in our fundamental education, of which the other constant is Language. The necessity of Arithmetic in human progress, its value in practical life, and its efficiency as a means of intellectual development demand that it shall be taught in the full light of modern psychology.

Most of the teaching of Arithmetic is determined by the text used. Hence it is evident that the use of a book which is unpedagogical in plan, arrangement, and character gives meagre results, while the use of a book which is in harmony with the laws of mental development and mental growth gives results which are commensurate with the time and energy devoted to it. For various reasons it has lately come to pass that Arithmetic is challenged to defend its position as one of the most prominent subjects in our schools. The author of this series shows a strong conviction that the cause of this widespread dissatisfaction with results now obtained is traceable to the character of the texts in general use. These pages also express the author's confident belief that it is possible to prepare a text which is entirely adapted to the needs and gradually developing powers of the child.

Modern psychology has contributed to our educational practice no truth of greater importance than this, that education is the process of building up, thought by thought, the structure which is to be the adult mind. From this it follows infallibly that children must be graded not merely by ages and capacities but by actual attainments, and that the texts provided for their use must also be graded. The educational text-writer must therefore fit his texts to the pupils. Commonplace as this truth nowadays is, the topical manual of Arithmetic, which considers the logic of the subject, not the psychology of the pupils, is still in use in most American schools.

Again, the inductive philosophy, which teaches us that principles are to be derived from the facts, and that facts are not to be selected or made to suit predetermined principles, and the experimental psychology, which demonstrates that nothing is completely learned until it has issued in action, have pointed unmistakably to the principle that Arithmetic should be learned in its examples. But few text-book writers have been willing to abandon the scholastic traditions descended from the centuries before either the inductive philosophy or experimental psychology were even in wise men's minds.

As opposed to the topical plan, what is now known as the spiral plan is rapidly growing in favor among teachers. This plan consists in daily reviewing the important processes so far known, and in frequently adding new processes. It combines the old and the new, the review and advance lesson, systematically. This series illustrates the spiral plan with no concessions to topical traditions. The topical division, if logically followed to all its conclusions, results in teaching addition one term and subtraction the next, fractions one year and denominate numbers the next. Though logical, such a division is neither psychological nor pedagogical. It neglects the mind's need of variety in the daily exercises, and tends to the repetition of mere process work. The topical Arithmetic may be an excellent teacher's manual, but the pupil, through ignorance, is not ready in any early grade for even abridged treatises upon the science and art of Arithmetic.

The alliance of oral, often called mental, Arithmetic with the written lessons illustrates the author's confidence in the principle of grading the topics and developing them through examples. No severer test of a theory can be applied than by putting it into exclusive practice. Written lessons may be given in which for weeks and months, even for terms and years, the pupils may conceal their failure to understand their work; but oral Arithmetic is the complete revelation of the progress and position of class and pupil in the science. It is impossible for a teacher to conduct an oral recitation which is beyond the pupils' comprehension. Interest at once ceases, and there are no answers to the questions. The successful union of oral and written lessons, as seen in all these pages, is an artistic achievement in pedagogy.

In itself oral work unquestionably deserves the prominence it receives in these pages. Mental Arithmetic promotes attention, concentration, accuracy, ingenuity, skill, familiarity, and confidence. It tests all written work as to the essential point, whether or not the process is understood. It secures the education of the class by the efforts of individuals, who are followed and criticised by their fellows. It is a language training of the highest value.

This series emphasizes to an unusual degree the necessity of employing the imagination in the study of Arithmetic. Most teaching of Arithmetic has appealed to the memory almost to the exclusion of the other faculties. Though the development of the reason is earnestly desired, little or no intelligent effort has been put forth with the certainty of accomplishing this object. The author has made it very clear that thinking or reasoning in mathematics involves the exercise of the imagination. Since faculties grow strong by exercise, work must be provided which will compel the exercise of the imagination.

Here is abundant material in the first three books of this series, of which the direct aim is the training of this faculty. This work not only aims at this power; but if done at all, the

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Brookline,
Mass.

COMPLETE
GRADED ARITHMETIC

FOURTH GRADE

BY

GEORGE E ATWOOD

D. C. HEATH & CO., PUBLISHERS
BOSTON NEW YORK CHICAGO

ATWOOD'S
COMPLETE GRADED
ARITHMETIC.

A new edition, thoroughly revised, and printed from new electrotype plates. The work for each grade may be had in a separate book as follows:

THIRD GRADE.
FOURTH GRADE.
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Here is abundant material in the first three books of this series, of which the direct aim is the training of this faculty. This work not only aims at this power; but if done at all, the desired result will be inevitable, for the nature of it is such that doing it by rule is precluded, even if the teacher would do so. As is clearly shown, the child can respond to these exercises only by imaging, comparing, and perceiving relations. This is reasoning. Let no one say that this work does not belong to Arithmetic. The purpose of it, and the certainty that this purpose can be accomplished, fully justify its introduction into a text in Arithmetic.

With theory and rules reduced to the smallest amount consistent with a proper presentation of the science, and with examples offered in great variety and number, this series secures the teaching and the learning of Arithmetic inductively. The problems unfold the processes and the forms of reasoning. This feature, together with the adoption of the spiral rather than of the topical plan, not only gives the pupil a graded manual of problems, but also compels thought as to what the problems mean and choice of methods for their solution. On the other hand, the topical plan, in which the process is given and is followed by a score or a hundred problems to be solved by that process, establishes the habit of working by rules without thought or choice. The spiral graded plan, based on problems, as embodied in this series, develops independence and self-reliance.

Drawn, as are the books of this series, upon these lines of modern psychology and of the best pedagogical practice, they deserve educational attention and recognition for the positive and noteworthy quality of being consistent in detail with the principles they profess to represent. These principles are no longer in question. There is nothing experimental here. The series stands to affirm where it may be used, the supreme importance of Arithmetic in education, and the necessity of conforming the methods of instruction to the principles of mental acquisition and mental growth.

SUGGESTIONS TO TEACHERS

Pupils who have done nearly or all the work of the Third Grade are prepared to take this book. The first thirty-five pages are a review of the latter part of the preceding grade, except that the problems are a little more difficult, and in these pages the fundamental rules are applied to easy examples in denominate numbers. Work in the fundamental processes is then gradually extended to multiplication by two or more figures, division by two or more figures, and the application of these new processes to problems. The measurement of rectangular surfaces begun in the Third Grade is continued and extended so as to include examples in which the area and one dimension are given to find the other dimension. The meaning of perimeter is taught, and many problems, oral and written, are given in which the perimeter is involved. The idea of volume measurements is developed, and pupils are taught to find the volume of rectangular solids. Simple examples in reduction ascending and reduction descending are also taught.

Teachers will observe that the arrangement of the subject-matter provides for a union of oral and written exercises throughout the year. The left-hand pages contain two lessons for written work, while the opposite pages are given up to oral exercises and the presentation of new matter. Each lesson is intended for a day's work, and during the two days devoted to the written lessons of any page the oral work on the opposite page is to be done. New types of examples are presented on the right-hand page from time to time. If these examples are to constitute a part of the subsequent written work, they are generally found in the lessons of the succeeding page. In some cases, however, they are found on one or more pages of oral exercises before they appear in the lessons. It will be observed that the lessons throughout the book contain examples for drill in the fundamental processes and problems involving the application of these processes. The drill in addition, subtraction, multiplication, and division demanded in the lessons cannot fail to give the desired facility in this work. Besides the many examples in addition given in the lessons, other exercises in this important arithmetical process are provided, as in the Third Grade, in columns found on pages 137, 157, 177, 197, 217, and 237. With the first three sets of columns will be found suggestions for securing greater rapidity in addition than can be obtained by adding one figure at a time.

The oral work deserves the most careful attention of teachers and pupils; for, aside from learning the fundamental processes, it is the most important part of the work to be done. It aims at facility in performing arithmetical processes with small numbers, the training of the imagination, and the development of the reasoning power. It aims at power rather than knowledge. Thinking, or reasoning, is perceiving relations. The fundamental operation in reasoning is comparison. This fact suggests the need of daily providing the opportunity for comparison. In mathematics the child first compares quantities that are apprehended by the senses. Gradually must follow the comparison of images of these quantities; but since most of the quantities considered by the pupil are from necessity ideal, he must acquire the power to compare imaginative quantities. This indicates the supreme importance of training the imagination in teaching arithmetic. If, in the solution of a problem, a pupil manifests little power to reason, or *think*, as it is so often expressed, it is because there are no ideas in his mind to be compared, and he has no ideas, because he has no power to image the quantities involved in the problem. It is a fatal error to put forth no well-defined effort for the development of the imagination. This mental faculty, like all others, becomes active and strong through exercise, and it should be stimulated to activity daily. In the solution of so-called concrete problems the teacher must ever insist that pupils try to see mentally the quantities involved in the problems. This constant effort of the teacher is supplemented by certain types of work in the oral exercises, notably the questions involving comparison. The child's mind cannot respond to these questions unless he can image the things compared; but a growing power to see things not present to the senses enables him to do this work easily and confidently.

Teachers must ever strive to prevent the habit of guessing how a problem is solved. A knowledge of what may be done with numbers is fundamental. The child must be led to see that two or more numbers may be united, and that a single number may be divided. It must be made clear to him that we unite unequal numbers by addition; we unite equal numbers by multiplication; we take one number from another by subtraction; we find how many times one number is contained in another by division; we find one of the equal parts of a number by division. This is easily accomplished by requiring the solution of problems in which the child handles the quantities involved. If a child works with any degree of confidence, he must habitually image the quantities mentioned in the problem, he must perceive the relation of these quantities to the answer sought, and he must be able to determine which of these processes will give the desired result. The importance of this confident effort of the child fully justifies the unusual amount of oral work, for it is in the solution of problems involving small numbers that this power is acquired. The child often has difficulty in determining the solution of a problem, because the numbers are large. He should be trained to help himself in such cases by substituting small numbers. With this change he readily perceives how the result is obtained, and he infers that the solution is the same with the larger numbers.

The object of the work in fractions is to induce the habit of imaging the equal parts of things whenever there is any reference to a fraction. Children cannot learn fractions from symbols. They must see fractional parts. The many fractional illustrations given here, and the grouping of the same, will prove very helpful in developing correct ideas of fractional parts, and the relation of one part to others. The object of this work will certainly be defeated if teachers emphasize the mere doing, and fall into the common error of telling pupils how to do it. All questions in fractions must be solved by reference first to the visible and later to imaged fractional illustrations.

There is no attempt to present in these pages any phase of what may be termed the "science of numbers." Formal definitions, principles, and rules are omitted. There are few explanations and directions how to perform any type of work. A child is confident and self-reliant because he is conscious of his own powers. He must therefore be trained to rely upon himself rather than to follow a printed rule or the directions of the teacher. As has been said, the aim is skill in performing arithmetical processes and the ability, through the development of the imagination and reason, to apply these processes in the solution of problems, oral and written. If this aim can be accomplished, it matters not whether the pupil can define addition or give the rule for multiplication. He knows what each process is and how to perform it. He is also able to choose with confidence the process to be applied in the solution of problems, and this is of the greatest importance. The intelligent solution of a problem is but the symbolic expression of judgments induced by imaging and comparing. It must follow that the pupil's work along this line, if it is but the repetition of what he has memorized or the blind following of a rule, is of no educational value. Another inference from this truth is that much of the so-called explanation or analysis of problems is of little or no value. If the pupil's solution is an expression of his own judgments, he receives little or no benefit from simply telling what he has done. If he has no judgments to express, but solves the problem by rule, the explanation or analysis, which in his case must of necessity be simply the repetition of a memorized form, is then harmful; for instead of indicating the pupil's power, it conceals the lack of it. It is easily determined whether the pupil is working intelligently. He may be required to mark the various results in his solution to show what they represent; he may be asked why he performs this or that operation; he may be asked what this or that result stands for. In all oral exercises a single brief statement is sufficient answer to any question.

It is important that children should know the signification of the signs used. The signs of addition and subtraction are easily understood. The use of the word *times* for the sign of multiplication is undoubtedly misleading, and it should be avoided as much as possible. It is decidedly preferable to think of 25 × 4 as indicating four 25's, for this harmonizes with the idea of multiplication. There is much confusion as to the meaning of the sign of division. $15 \div 3$, as commonly interpreted, means, in one case, find how many 3's in 15; in another case, find one-third of 15. Teachers are familiar with these two types of examples involving division: At 3 cents apiece, how many oranges cost 15 cents? If 3 pencils cost 15 cents, what does one pencil cost? In the first example, we wish to find how many 3-cents in 15 cents; in the second, we wish to find one-third of 15 cents. In the first, the answer is 5 3-cents; in the second, it is 5 cents. If teachers will divide 15 pennies as these problems require, the truth of the above will appear. It is quite unnecessary to use the sign of division to symbolize the two processes. It will greatly simplify the matter to indicate the two solutions thus: $15 \div 3$ and $\frac{1}{3}$ of 15. The Germans distinguish these two kinds of division by giving them different names, and it has often been suggested that we would do well to call the former *division* and the latter *partition*. Whether we give them different names, we should indicate the solutions differently. It will contribute to clear thinking if pupils are required to indicate in one of these ways the solution of every problem involving division.

The exercises, oral and written, provide for a constant review of what has been previously learned. An effort has been made to prepare and arrange the work that pupils should do from day to day as definitely as this can be anticipated. In the preparation of these pages, the purpose has been to insure the all-important review, to relieve the teacher of the burden of supplementing the work of the text, and thus to avoid the strain on the eyes of the pupils occasioned by taking so many examples from the board.

Judging from what is attempted in Arithmetic in this grade in many schools, teachers may think that some of this work is beyond the power of fourth year pupils. If they take this book with the preparation contained in the Third Grade book and the greater power which those exercises have developed, they can certainly do this work easily. As a rule, the problems involve small numbers, and comparatively few of them require more than one operation in the solution. Teachers should not hesitate, however, to omit any that may prove too difficult. These are not necessary in the preparation for Fifth Grade work. Many of the examples for drill in processes contain larger numbers, but teachers will not object to this, for the addition of one or more steps in the process does not greatly increase the difficulties.

COMPLETE GRADED ARITHMETIC

FOURTH GRADE

LESSON 1

1. 7596 × 4. **2.** 15,828 ÷ 4. **3.** 23,236 ÷ 4.

4. 9378 × 5. **5.** 14,345 ÷ 5. **6.** 33,540 ÷ 5.

7. 6894 × 6. **8.** 28,548 ÷ 6. **9.** 55,080 ÷ 6.

10. 8576 × 7. **11.** 16,434 ÷ 6. **12.** 54,048 ÷ 6.

13. Add 8537, 9685, 3769, 8298, 6876, 8657, and 5795.

14. Add 4685, 7549, 5987, 9376, 6894, 8668, and 7959.

15. Add 6798, 3748, 9584, 7362, 4758, 3849, and 7485.

16. Find the cost of three hundred sixty-eight barrels of flour at five dollars a barrel.

17. A grocer bought tea for $84.65 and sold it for $112. How much did he gain?

18. At six dollars an acre, how many acres of land will cost nine hundred thirty-six dollars?

19. A farmer sold fifty-eight sheep and had seventy-six left. How many did he have at first?

20. A merchant sold shoes at $4 a pair, receiving $192 for them. How many pairs did he sell?

21. A man traveled 478 miles by rail, 386 miles by stage, and 95 miles on foot. How far did he travel?

LESSON 2

1. 58,414 − 32,648. **2.** 88,915 − 48,916.
3. 70,612 − 45,839. **4.** 70,011 − 33,165.
5. 82,472 − 23,694. **6.** 91,526 − 72,849.

7. How much flour, at $5 a barrel, will cost $925?

8. Simplify 768 + 354 − 168 − 243 + 784 − 186 + 628.

9. Add 5738, 9265, 8634, 4796, 7598, 6856, and 7938.

10. A man paid $510 for 6 acres of land. How much did it cost per acre?

11. If a man earns $1250 a year and spends $775, how much does he save in three years?

12. A farmer bought 4 cows at $38 apiece and 65 sheep at $3 a head. How much did he pay for all?

13. A merchant bought goods for $765 and sold them so as to gain $168. How much did he get for them?

LESSON 3

1. 3947 × 5. **2.** 23,645 ÷ 5. **3.** 19,535 ÷ 5.
4. 8769 × 6. **5.** 11,682 ÷ 6. **6.** 18,570 ÷ 6.
7. 5847 × 7. **8.** 22,494 ÷ 6. **9.** 48,558 ÷ 6.

10. Add 9387, 4965, 8758, 5694, 7869, 6385, and 9758.

11. Add 4768, 9487, 3876, 6593, 7589, 8495, and 5476.

12. A grocer bought flour at $5 a barrel, paying $865 for it. How much did he buy?

13. A man paid $275 for a horse and $125 less for a carriage. How much did he pay for both?

14. A has 1104 acres of land, which is 6 times as many acres as B has. How many acres have both?

15. A lady paid $16 for a cloak, $6.75 for a hat, and had $8.45 left. How much money did she have at first?

$$\overbrace{6\ 4\ 2}^{\text{Millions,}},\ \overbrace{5\ 1\ 3}^{\text{Thousands,}},\ \overbrace{8\ 9\ 7}^{\text{Units.}}.$$

Six hundred forty-two *million,* five hundred thirteen *thousand,* eight hundred ninety-seven.

1. Read: 508,070 9,740,000 40,076,054 700,008,400

2. Write six hundred four million, five hundred eight thousand, nine hundred seven.

3. Write seventy-five million, six.

4. Write three hundred twenty million, ninety thousand, eight hundred.

5. Read: 400,600 7,080,009 28,500,704 406,000,060

6. Write five hundred twenty-eight million, eight thousand, six hundred seven.

7. Write six million, six thousand, six.

8. Read: 207,085 4,060,070 30,500,408 328,007,050

9. Write eighty-four million, eight hundred six thousand, seven hundred five.

10. Write forty million, forty thousand, forty.

11. Read: 600,095 6,085,700 45,600,040 704,380,068

12. Write four hundred eight million, seventy-five thousand, eight hundred ninety-seven.

13. Write ninety million, forty thousand, fifty-four.

14. Write two hundred forty-six million, five hundred forty-eight thousand, nine hundred sixty-three.

$4.65 × 4.	$.65 × 5.	$.75 × 4.	$.06 × 268.
$4.65	$.65	$.75	$.06
4	5	4	268
$18.60	$3.25	$3 00	$16.08

LESSON 4

1. $4.68 × 7.
2. $.95 × 7.
3. $.06 × 368.
4. $6.45 × 8.
5. $.78 × 8.
6. $.08 × 476.

7. Add 7384, 4859, 7896, 3648, 4839, 2637, and 7896.

8. At $2.65 a barrel, how much must a grocer pay for 8 barrels of potatoes?

9. At eighty-five cents a yard, how much must a lady pay for seven yards of silk?

10. How much will eight hundred seventy-six pounds of cheese cost at nine cents a pound?

11. A merchant sold goods for $741 and gained $186.48. How much did he pay for the goods?

12. Bought a carriage for $175 and a horse for $85 more than I paid for the carriage. Find the cost of both.

LESSON 5

1. 9,854,715 – 4,094,779.
2. Divide 573,276 by 4.
3. 6,523,751 – 1,624,957.
4. Divide 989,544 by 6.
5. Write in words 503,090.
6. Divide 786,576 by 8.

7. Simplify 645 – 218 + 348 – 299 + 874 – 178 + 387.

8. At three dollars seventy-five cents a pair, how much do 6 pairs of shoes cost?

9. A lady paid $6.75 for a hat and twice as much for a cloak. Find the cost of both.

10. A man bought a house for $4350 and sold it for $5225. How much did he gain or lose?

11. A grocer sold 8 bushels of potatoes at 65 cents a bushel. How much did he receive for them?

12. At eight cents a quart, how much will four thousand two hundred seventy-five quarts of berries cost?

1. 3)11 3)14 3)17 3)16 3)18 3)20 3)23
2. 3)19 3)26 3)22 3)28 3)25 3)29 4)14
3. 4)17 4)10 4)15 4)19 4)11 4)18 4)25

Besides the many examples in addition given in the lessons, other drills are necessary in this most important arithmetical process. For this purpose, exercises in addition are given on pages 137, 157, 177, 197, 217, 237. Devote a little time to these exercises daily, making use of the columns on this page until page 157 is reached, then using the columns on page 157 until page 177 is reached, and so on.

It is easy to add 10 to any number, and pupils should be trained to look out for the 10's in addition. If the sum at any point is 26, and the next two or three figures make 10, pupils should think 26, 36. If the three figures above 26 are 4, 9, 6, pupils should think 26, 35, 45, first adding the 9 to 26, and then adding the 10 to 35.

EXERCISES IN ADDITION

5	3	6	7	8	3	8	6	7	2	7	3
2	4	4	4	4	7	9	3	4	5	3	5
5	7	3	5	7	2	2	4	6	8	4	7
6	6	8	7	3	9	7	3	3	5	5	8
5	6	7	5	6	8	5	5	6	8	6	2
4	8	5	7	6	3	3	8	8	5	2	5
2	4	8	3	8	2	6	7	2	7	8	4
5	4	5	8	4	7	9	2	8	4	3	6
8	7	6	7	7	8	4	5	1	3	8	7
4	6	7	4	6	4	3	6	8	6	7	3
3	7	4	3	3	6	7	5	7	4	4	7
3	3	7	6	5	3	9	8	5	7	6	9
8	6	6	6	4	9	9	7	4	8	8	6
4	8	8	7	3	7	7	1	8	8	8	9
a	*b*	*c*	*d*	*e*	*f*	*g*	*h*	*i*	*j*	*k*	*l*

LESSON 6

1. $9.47 × 7. **2.** $.86 × 8. **3.** $.08 × 459.

4. $7.68 × 8. **5.** $.95 × 7. **6.** $.09 × 287

7. Simplify 596 + 728 − 379 + 287 − 498 + 723 − 287.

8. Add 6479, 5836, 8748, 4657, 8795, 6548, and 9867.

9. What is the value of 375 quarts of berries at eight cents a quart?

10. A dealer sold 6 horses at the same price for $990. What was the price per head?

11. A grocer sold eight barrels of flour at $5.85 a barrel. How much did he get for it?

12. A man bought goods for $456 and sold them at a profit of $86.64. How much did he get for them?

13. After a farmer had sold 468 bushels of potatoes, he had 265 bushels left. How many bushels did he raise?

LESSON 7

1. 9,697,481 − 8,907,483. **2.** 7,044,235 − 6,298,659.

3. 9,956,511 − 4,385,624. **4.** 3,113,522 − 2,903,787.

5. Simplify 895 − 437 + 328 − 496 + 684 − 389 + 758.

6. Add 7458, 6937, 8754, 6398, 4726, 8479, and 6847.

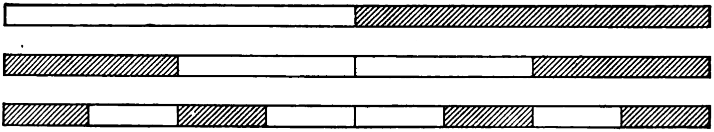
7. Express in words 400,400. **8.** 374,685 ÷ 5.

9. A has 165 sheep, and B has eight times as many. How many have both?

10. A man sold a house for $4875 and lost $625. How much did he pay for the house?

11. At what price per head can a man buy six cows for two hundred seventy-six dollars?

12. What is the value of six thousand eight hundred seventy-four pounds of sugar at six cents a pound?



1. Into how many equal parts is the first figure divided? The second? The third? What is each part of the first? What is each part of the second? What is each part of the third?

2. What do we call 3 parts of the second? 3 parts of the third? 5 parts of the third?

3. How must you divide anything to get halves of it? To get fourths of it? To get eighths of it?

4. $\frac{1}{2}$ of 8 is   6 is $\frac{1}{2}$ of $\frac{1}{4}$ of 8 is   5 is $\frac{1}{4}$ of

5. If 1 eighth of a line is 3 feet, what is the length of 3 fourths of the line?

6. $\frac{1}{4}+\frac{1}{8}$ $\frac{1}{2}-\frac{1}{4}$ $\frac{1}{2}+\frac{1}{8}$ $\frac{1}{2}-\frac{3}{8}$

7. If a boy walks 1 eighth of a mile a day, in how many days does he walk two miles?

8. $\frac{1}{2}$ of 10 is   7 is $\frac{1}{2}$ of $\frac{1}{8}$ of 16 is   4 is $\frac{1}{8}$ of

9. If a man eats 1 fourth of a pie every day, how many pies will he eat in sixteen days?

10. $\frac{1}{2}$ of 12 is $1\frac{1}{2}=\frac{?}{2}$ $\frac{5}{2}=?$ $\frac{1}{4}$ of 12 is

11. A boy spent 8 cents, which was 1 eighth of his money. How many 8 cents did he have left?

12. A boy bought a knife for 3 fourths of his money and had 15 cents left. How much did the knife cost?

$15 ÷ 4.	$18 ÷ $.05.	$20.64 ÷ $.06.
4)$15.00	$.05)$18.00	$.06)$20.64
$3.75	360	344

LESSON 8

1. $39 ÷ 5.   2. $23.45 ÷ $.05.   3. $26 ÷ $.05.

4. $45 ÷ 6.   5. $27.60 ÷ $.06.   6. $27 ÷ $.06.

7. Add 9584, 8473, 7362, 2637, 3748, 4859, and 5432.

8. Five bushels of potatoes cost $4.25. What was the price per bushel?

9. A grocer sold soap at five cents a cake for $22. How many cakes did he sell?

10. At six cents a pound, how many pounds of sugar cost fifty-one dollars ninety cents?

11. At six cents a quart, how many quarts of cherries can be bought for nine dollars ninety cents?

12. A merchant bought 4784 yards of muslin and sold 2978 yards. How many yards did he have left?

LESSON 9

1. $51 ÷ 6.   2. $52 ÷ $.05.   3. $.08 × 386.

4. 4,345,770 – 3,090,905.   5. 8,429,745 – 1,561,877.

6. Simplify 426 – 287 + 942 – 269 + 473 + 783 – 589.

7. Add 7468, 5974, 8469, 7583, 8976, 9758, and 4869.

8. At $3.85 a barrel, how much does a grocer receive for 9 barrels of flour?

9. A house cost $5250, which is six times as much as the lot cost. Find the cost of both.

10. A father gave his son $8725 and his daughter $1875 less. How much did he give to both?

11. A boy sold berries at 5 cents a quart, receiving $14 for them. How many quarts did he sell?

12. A man divided a sum of money among his 6 children, giving each one $475. Find the sum divided.

4 gills = 1 pint pt.
2 pints = 1 quart qt.
4 quarts = 1 gallon gal.

2 pints = 1 quart qt.
8 quarts = 1 peck pk.
4 pecks = 1 bushel bu.

1. At 8 cents a quart, how much will a quart and a pint of milk cost?

2. 8 quarts are — pints. 20 pints are — quarts.

3. A boy sold a ball for 45 cents and gained 10 cents. How much did he pay for it?

4. At 6 cents apiece, how much do 8 pencils cost?

5. If your mother buys a quart of milk a day, in how many days does she buy eight gallons?

6. Read: 408,075 5,034,604 30,000,700 268,040,065

7. A grocer sold 2 bushels of potatoes at 20 cents a peck. How much did he get for them?

8. At 8 cents apiece, how many tops cost 56 cents?

9. A boy spent 15 cents, which was 1 third of his money. How much did he have left?

10. 9 gallons are — quarts. 60 quarts are — gallons.

11. If 5 cents is 1 eighth of a boy's money, how many oranges could he buy at four cents apiece?

12. 7 pecks are — quarts. 48 quarts are — pecks.

13. Four girls went to a fruit store, and each one bought four oranges. How many did all buy?

14. Read: 370,406 4,008,054 28,600,060 503,060,040

15. If 8 cents is 1 eighth of a boy's money, how much can he spend and have 1 fourth of his money left?

16. 9 bushels are — pecks. 28 pecks are — bushels.

17. A boy spent 3 fourths of his money for a ball and had twenty cents left. How much did the ball cost?

LESSON 10

1. Multiply 748,095 by 7. **2.** Divide 454,350 by 5.

3. Multiply 596,478 by 8. **4.** Divide 843,582 by 6.

5. Express in words 65,098. **6.** Divide 583,494 by 6.

7. $45 ÷ 6. **8.** $61.45 ÷ $.05. **9.** $39 ÷ $.06.

10. Simplify 589 − 296 + 487 − 189 + 786 + 685 − 249.

11. A man paid each of his 7 clerks $8.75. How much did all receive?

12. By selling a house for $4250, a man gained $475. How much did the house cost?

13. A merchant bought flour at $6 a barrel, paying $3924 for it. How many barrels did he buy?

14. After a man had sold 758 bushels of wheat, he had 369 bushels left. How many bushels did he raise?

LESSON 11

1. 5,234,562 − 4,246,969. **2.** 8,800,000 − 2,791,504.

3. 9,558,184 − 2,800,088. **4.** 2,974,441 − 1,995,075.

5. Add $56.43, $48, $57.83, $69, $83.09, and $64.

6. Add 6579, 4858, 9465, 8736, 5487, 7856, and 6984.

7. Multiply ninety million six hundred eight thousand seventy by nine.

8. A grocer bought 9 barrels of flour at $4.85 a barrel. How much did he pay for it?

9. Find the cost of seven hundred eighty-four pounds of beef at seven cents a pound.

10. A man bought sugar at 5 cents a pound, paying $18.55 for it. How many pounds did he buy?

11. A man bought eight carriages at the same price, paying $2200 for them. Find the cost of each.

12 inches make 1 foot. **3 feet make 1 yard.**

If 5 men do a piece of work in 6 days, they do 30 days' work. 6 men can do it in 5 days. 3 men can do it in 10 days. 10 men can do it in 3 days.

1. $\frac{3}{4}$ of 8 is $2\frac{1}{2} = \frac{?}{2}$ $\frac{3}{2} = ?$ $\frac{1}{8}$ of 24 is

2. If 1 eighth of a yard of ribbon is worth 22 cents, how much is half a yard worth?

3. 5 feet are — inches. 12 yards are — feet.

4. If 4 men can do a piece of work in 6 days, in how many days can 3 men do it? 2 men?

5. At 4 cents apiece, how many oranges cost $4.32?

6. In how many days can 4 men do 24 days' work? How many men can do it in 3 days?

7. $\frac{1}{2}$ of 14 is 8 is $\frac{1}{2}$ of 4 is $\frac{1}{4}$ of $\frac{1}{8}$ of 32 is

8. A man bought a coat for $12, which was 1 fourth of his money. How much did he have left?

gal.	qt.	pt.
6	3	1
4	2	1
3	1	1
14	3	1

In adding these numbers, we write them so that units of the same kind stand in a column. Adding the pints, we get 3 pints, which is 1 quart and 1 pint. We write the 1 pint under the pints. Adding the 1 quart to the quarts, we get 7 quarts, which is 1 gallon and 3 quarts. We write the 3 quarts under quarts. Adding the 1 gallon to the gallons, we get 14 gallons. The sum is 14 gal. 3 qt. 1 pt.

	gal.	qt.	pt.		yd.	ft.	in.		bu.	pk.	qt.
	5	2	1		1	2	8		4	3	6
1.	7	0	1	2.	3	1	6	3.	2	1	5
	8	3	0		2	0	4		7	2	4

	gal.	qt.	pt.		yd.	ft.	in.		bu.	pk.	qt.
	7	3	0		5	1	9		6	2	7
4.	5	2	1	5.	4	2	0	6.	5	3	5
	9	3	0		7	1	8		8	2	3

LESSON 12

1. Multiply 546,789 by 8. 2. Divide 74,587,000 by 5.

3. Multiply 389,465 by 9. 4. Divide 69,876,540 by 6.

5. Add 8 gal. 3 qt. 1 pt., 3 gal. 2 qt. 1 pt., 5 gal. 1 qt. 1 pt., and 6 gal. 1 qt.

6. Add 46 bu. 3 pk. 6 qt., 18 bu. 2 pk. 5 qt., 12 bu. 7 qt., and 9 bu. 2 pk. 5 qt.

7. Add 8 yd. 2 ft. 7 in., 7 yd. 1 ft. 8 in., 6 yd. 11 in., 9 yd. 2 ft., and 6 yd. 1 ft. 7 in.

8. Add 7 gal. 2 qt. 1 pt., 4 gal. 3 qt., 5 gal. 1 pt., 3 qt. 1 pt., 8 gal. 2 qt. 1 pt., and 5 gal. 2 qt.

9. Add eighty million six hundred thousand seventy, 637,498, nine million eighty thousand thirty-seven, six hundred fifty-eight thousand nine hundred eighteen, and eighty-six thousand seven hundred fifty-four.

LESSON 13

1. Divide 42,900,004 by 7. 2. 9,862,457 – 8,894,969.

3. Divide 87,604,920 by 6. 4. 4,456,266 – 3,797,989.

5. Multiply 5,468,759 by 6. 6. 9,164,146 – 3,195,747.

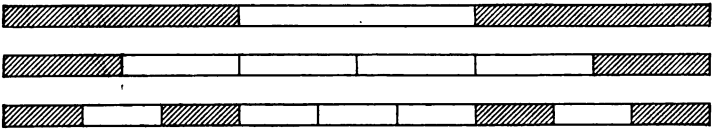
7. A grocer sold six barrels of potatoes for $15. Find the average price per barrel.

8. A man sold berries at 6 cents a quart for $45. How many quarts did he sell?

9. A man has 360 sheep in one field and 84 less in another field. How many sheep has he?

10. Add 4 yd. 2 ft. 3 in., 5 yd. 1 ft. 8 in., 6 yd. 2 ft. 10 in., 12 yd. 1 ft. 11 in., and 9 yd. 2 ft. 8 in.

11. A man has 46 bu. 1 pk. of wheat in one bin and 53 bu. 3 pk. in another. How much has he in both?



1. Into how many equal parts is the first figure divided? The second? The third? What is each part of the first? What is each part of the second? What is each part of the third?

2. What do we call 2 parts of the first? 5 parts of the second? 4 parts of the third? 7 parts of the third?

3. How must you divide anything to get thirds of it? To get sixths of it? To get ninths of it?

In the work of comparison, which begins here in this grade, pupils are simply to tell how many times the second number the first is, or what part of the second the first is.

4. Compare: $\frac{1}{6}$ with $\frac{1}{3}$ $\frac{2}{3}$ with $\frac{1}{6}$ $\frac{1}{3}$ with $\frac{1}{2}$

5. Compare: $\frac{1}{8}$ with $\frac{1}{4}$ $\frac{1}{2}$ with $\frac{1}{4}$ $\frac{1}{3}$ with $\frac{1}{9}$

6. Compare: $\frac{1}{3}$ with $\frac{2}{3}$ $\frac{1}{6}$ with $\frac{1}{2}$ $\frac{1}{8}$ with $\frac{1}{2}$

7. At 2 for 5 cents, how much will 10 oranges cost?

8. A boy sold papers at 3 cents apiece for $3.45. How many papers did he sell?

9. $\frac{1}{3}+\frac{1}{6}$ $\frac{2}{3}-\frac{1}{2}$ $\frac{1}{3}+\frac{1}{2}$ $\frac{1}{3}-\frac{1}{6}$

10. If 1 sixth of a line is 7 feet, how many 7 feet are there in the line? How long is $\frac{5}{6}$ of the line?

11. $\frac{1}{3}$ of 9 is $1\frac{1}{3}=\frac{?}{3}$ $\frac{5}{3}=?$ $\frac{1}{6}$ of 12 is

12. If 2 men can do a piece of work in 6 days, in how many days can 4 men do it? 3 men? 12 men?

13. $\frac{1}{3}$ of 12 is 5 is $\frac{1}{3}$ of $\frac{1}{9}$ of 18 is 3 is $\frac{1}{9}$ of

14. A girl spent 9 cents, which was 1 ninth of her money. How many 9 cents did she have left?

LESSON 14

1. 11,034 ÷ 6.   2. $.06 × 468.   3. $39 ÷ $.06.

4. 23,448 ÷ 6.   5. $.08 × 675.   6. $57 ÷ $.06.

7. Write in words 5,234,164.   8. 49,783,010 ÷ 5.

9. At what price per pound will six pounds of tea cost four dollars fifty cents?

10. Each of seven boys has one hundred forty-eight marbles. How many have all?

11. What sum of money must be added to $285.38 to make six hundred twenty-five dollars?

12. A man paid $1250 for a lot and built a house on it costing 5 times as much as the lot. Find the cost of both.

13. A man bought 640 acres of land at $6 an acre. He sold four hundred acres at $8 an acre and the remainder at $9 an acre. How much did he gain?

LESSON 15

1. 9,134,231 – 1,278,653.   2. 8,507,491 – 3,050,708.

3. Divide 2,300,076 by 6.   4. 7,773,332 – 1,673,506.

5. At $8 a yard, how much will 167 yards of silk cost?

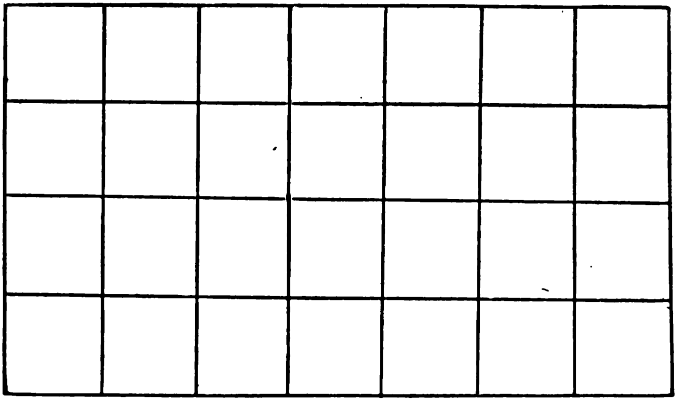
6. Add 9876, 8769, 7698, 6987, 2345, 3452, and 4523.

7. Multiply seven million eight hundred sixty-nine thousand ninety-seven by five.

8. Add 48 bu. 2 pk. 6 qt., 79 bu. 3 pk. 5 qt., 54 bu. 7 qt., 43 bu. 2 pk., and 18 bu. 2 pk. 5 qt.

9. A man bought a horse and carriage for $550, paying $165 for the horse. Find the cost of the carriage.

10. A man paid six hundred sixty dollars for a span of horses, which is four times as much as he paid for a carriage. How much did he pay for both?



1. How many squares are there in one long row? In 2 rows? In 3 rows? In the whole rectangle?

2. If we had 9 squares in a row and 5 rows, how many squares would we have? How many in 8 rows?

3. At 3 for 5 cents, how much will 18 apples cost?

4. How many dozen marbles can you buy for 36 cents at half a cent apiece?

5. Compare: $\frac{1}{4}$ with $\frac{1}{2}$ $\frac{1}{2}$ with $\frac{3}{4}$ $\frac{3}{8}$ with $\frac{3}{4}$

6. A man sold 3 fourths of his sheep and had 24 left. How many did he sell?

7. Compare: $\frac{1}{2}$ with $\frac{1}{8}$ $\frac{1}{8}$ with $\frac{3}{4}$ $\frac{3}{4}$ with $\frac{1}{4}$

8. A rectangle contains 54 squares. If there are 6 rows, how many squares are there in each row?

9. $\frac{1}{4}$ of 16 is 6 is $\frac{1}{4}$ of $\frac{1}{6}$ of 18 is 4 is $\frac{1}{6}$ of

10. A rectangle contains 44 squares. If there are 11 squares in each row, how many rows are there?

11. If two men can do a piece of work in 8 days, how many men can do it in 4 days? In 1 day? In 16 days?

LESSON 16

1. Divide 684,720 by 5. 2. 954,687 × 6.

3. Multiply 7,894,365 by 8. 4. 527,844 ÷ 6.

5. At $5 an acre, how many acres of land cost $800?

6. At $3.55 apiece, what will half a dozen hats cost?

7. Add $98, $8.47, $57, $7.65, $24, and $7.86.

8. At six cents a quart, how many quarts of berries can be bought for $21.60?

9. If a man has $786 in his safe and $239.65 less in the bank, how much money has he?

10. Add 8 gal. 1 qt. 1 pt., 7 gal. 3 qt. 1 pt., 6 gal. 2 qt., 8 gal. 1 pt., and 5 gal. 2 qt. 1 pt.

11. I received $875 for a piece of land, which is $475 less than I paid for it. Find the cost of the land.

LESSON 17

1. Divide 3,544,896 by 6. 2. 8,011,114 – 7,061,345.

3. Divide 4,932,130 by 5. 4. 9,560,004 – 2,901,598.

5. Multiply 760,985 by 7. 6. 8,982,243 – 2,985,904.

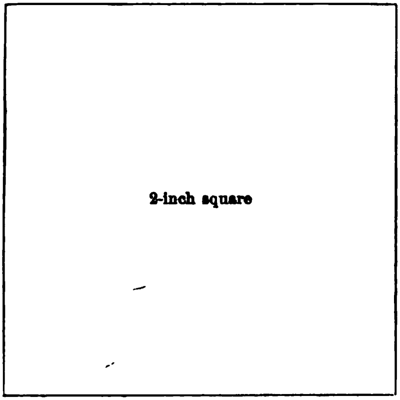
7. Add 4859, 5948, 4837, 3726, 6273, 7384, and 8495.

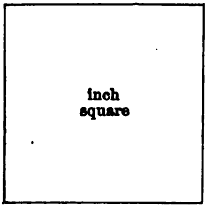
8. At eight cents a quart, what is the value of six bushels of chestnuts?

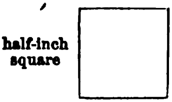
9. A piece of land that cost $1500 was sold at a profit of $4500. How much was received for it?

10. A dealer sold cheese at 6 cents a pound, receiving $40.50 for it. How many pounds did he sell?

11. Add four hundred fifty-eight thousand nineteen, 789,456, seventy-eight thousand ninety, 286,327, and six hundred thousand eight hundred forty-seven.







1. In a rectangle 1 ft. by 5 in., how many square inches in each row? How many rows are there?

2. Compare a half-inch square with a square inch.

3. In a rectangle 18 in. by 6 in., how many 2-inch squares in each row? How many rows are there?

4. $\frac{1}{6}$ of 24 is 5 is $\frac{1}{6}$ of 3 is $\frac{1}{8}$ of $\frac{1}{8}$ of 40 is

5. In an oblong 5 in. by 2 in., how many half-inch squares in each row? How many rows are there?

From 9 yd. 2 ft. 8 in. subtract 4 yd. 2 ft. 10 in.

yd.	ft.	in.
9	2	8
4	2	10
4	2	10

We cannot take 10 in. from 8 in., so we take 1 ft. from the 2 ft. 12 in. and 8 in. are 20 in. 10 in. from 20 in. leaves 10 in. We cannot take 2 ft. from 1 ft., so we take 1 yd. from the 9 yd. 3 ft. and 1 ft. are 4 ft. 2 ft. from 4 ft. leaves 2 ft. 4 yd. from 8 yd. leaves 4 yd.

	gal.	qt.	pt.
1.	7	2	0
	3	3	1

	yd.	ft.	in.
2.	8	1	6
	4	2	9

	bu.	pk.	qt.
3.	9	1	4
	4	3	6

	gal.	qt.	pt.
4.	9	1	1
	4	3	0

	yd.	ft.	in.
5.	7	2	3
	2	0	9

	bu.	pk.	qt.
6.	8	3	5
	5	3	7

LESSON 18

1. Multiply 458,936 by 9. **2.** 498,760 ÷ 4.

3. Multiply 4,738,659 by 8. **4.** 294,345 ÷ 5.

5. Write in words 6,007,040. **6.** 893,094 ÷ 6.

7. From 16 yd. 2 ft. 5 in. subtract 8 yd. 10 in.

8. From 9 gallons 2 quarts subtract 4 gallons 3 quarts.

9. From 16 bu. 2 pk. 5 qt. subtract 7 bu. 3 pk. 7 qt.

10. Add 5462, 7587, 6324, 3427, 4326, 4873, and 3748.

11. Add 7 gal. 3 qt. 1 pt., 9 gal. 1 pt., 8 gal. 3 qt. 1 pt., and 6 gal. 3 qt.

12. A grocer had 48 gal. 2 qt. of oil and sold 19 gal. 1 qt. 1 pt. How much did he have left?

13. From a piece of ribbon containing 26 yd. 2 ft., a merchant sold 19 yd. 2 ft. 6 in. How much was left?

LESSON 19

1. Divide 9,918,456 by 6. **2.** 5,742,563 – 4,967,967.

3. From 12 gal. take 7 gal. 2 qt. **4.** 274,960 ÷ 7.

5. At what price will nine books cost $14.85?

6. Add 3726, 2648, 4859, 6273, 7384, 8495, and 4523.

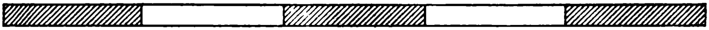
7. Multiply eight hundred seventy-nine thousand six hundred fifty-eight by eight.

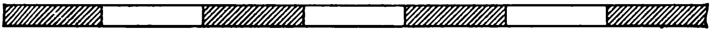
8. Land that cost $2116 was sold at a loss of $468. How much was received for it?

9. A farmer sold 248 sheep, lost 73, and had 649 left. How many did he have at first?

10. Add 8 gal. 3 qt. 1 pt., 7 gal. 2 qt., 8 gal. 1 qt. 1 pt., 7 gal. 1 pt., and 9 gal. 3 qt.

11. A farmer put his wheat into 4 bins, putting 468 bushels into each bin. How many bushels did he have?





1. Into how many equal parts is the first figure divided? The second? What is each part of the first? What is each part of the second?

2. What do we call 2 parts of the first? 3 parts of the second? 5 parts of the second?

3. How must you divide anything to get fifths of it? To get sevenths of it? To get fourths of it?

In adding two numbers composed of tens and units, add the tens first and then add to their sum the sum of the units. In adding 78 and 55, you should first think 120, and then adding 13, you will give the sum 133.

4.	69	48	75	67	58	66	84	73	59	96
	+9	59	85	79	87	97	49	86	87	75

5. A merchant sold ribbon at 5 cents a yard for $6. How many yards did he sell?

6. Compare: $\frac{1}{5}$ with $\frac{3}{5}$ $\frac{6}{7}$ with $\frac{2}{7}$ $\frac{2}{7}$ with $\frac{4}{7}$

7. A rectangle contains 36 sq. in. If there are 9 sq. in. in each row, how many rows are there?

8. Compare: $\frac{4}{5}$ with $\frac{2}{5}$ $\frac{1}{7}$ with $\frac{6}{7}$ $\frac{4}{7}$ with $\frac{1}{7}$

9. Frank picked 16 quarts of berries and sold $\frac{5}{8}$ of them. How many quarts did he have left?

10. 4 is $\frac{1}{8}$ of 7 is $\frac{1}{4}$ of 4 is $\frac{1}{5}$ of 4 is $\frac{1}{7}$ of

11. If 2 men can do a piece of work in 10 days, in how many days can 4 men do it? 5 men? 1 man?

12. In a rectangle 19 in. by 5 in., how many square inches are there in each row? How many rows?

LESSON 20

1. Divide 326,425 by 5. 2. Multiply 756,498 by 7.
3. Divide 758,646 by 6. 4. Multiply 796,587 by 8.
5. $34.75 × 8. 6. $.07 × 486. 7. $.96 × 9.
8. $47.16 ÷ 6. 9. $78 ÷ $.05. 10. $.87 × 8.

11. Add $8, $24.08, $7.85, $48.45, $9.38, and $86.47.

12. If a man earns $1250 a year and spends $575, how much can he save in 7 years?

13. A man bought clothes for $18, a hat for $2.75, and had $15.65 left. How much had he at first?

14. A man sold 7 eighths of his berries at 8 cents a quart for $32.48. How many quarts did he keep?

15. A grocer sold 5 gallons of molasses at a uniform price, receiving $4.25 for it. Find the price per gallon.

LESSON 21

1. Divide 4,019,436 by 6. 2. 9,248,344 – 8,448,570.
3. Multiply 783,958 by 8. 4. 9,412,341 – 3,909,786.
5. Write in words 8,093,704. 6. 6,524,145 – 5,689,277.

7. A has $385, which is $42.75 less than B has. How much have both?

8. A man divided $46.50 equally among his six clerks. How much did each receive?

9. A man has $38.75. How much more must he have to buy a carriage for $135?

10. A dealer sold berries at six cents a quart for fifty-one dollars. How many quarts did he sell?

11. A man bought wool at 22 cents a pound and sold it at 28 cents. How much did he gain on 12,675 pounds?

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1. At the rate of 3 for 10 cents, how many oranges can you buy for 60 cents?

2. $\frac{1}{2}$ of 18 is $\quad$ $2\frac{1}{3} = \frac{?}{3}$ $\quad$ $\frac{7}{2} = ?$ $\quad$ $\frac{1}{3}$ of 15 is

3. If eight peaches cost 24 cents, how much would you have to pay for 20 peaches?

4. $\frac{1}{3} + \frac{1}{6}$ $\quad$ $\frac{5}{6} - \frac{1}{3}$ $\quad$ $\frac{1}{3} + \frac{1}{9}$ $\quad$ $\frac{2}{3} - \frac{2}{9}$

5. If 7 pounds of sugar cost 40 cents, how much would I have to pay for 21 pounds?

6. $\frac{3}{4}$ of 16 is $\quad$ 9 is $\frac{1}{4}$ of $\quad$ $\frac{1}{6}$ of 30 is $\quad$ 6 is $\frac{1}{6}$ of

7. If 3 pounds of rice cost 25 cents, how much would you have to pay for 27 pounds?

8. Compare: $\frac{1}{9}$ with $\frac{1}{3}$ $\quad$ $\frac{1}{2}$ with $\frac{1}{6}$ $\quad$ $\frac{4}{9}$ with $\frac{8}{9}$

9. If a man puts 15 quarts of berries into pint baskets, how many baskets will it take?

10. $\frac{1}{5}$ of 20 is $\quad$ 5 is $\frac{1}{5}$ of $\quad$ 5 is $\frac{1}{7}$ of $\quad$ 5 is $\frac{1}{8}$ of

11. If two yards of ribbon cost 24 cents, how much would you have to pay for 5 yards?

12. $\frac{2}{3} + \frac{1}{9}$ $\quad$ $\frac{2}{3} - \frac{4}{9}$ $\quad$ $\frac{1}{3} + \frac{5}{9}$ $\quad$ $\frac{1}{3} + \frac{2}{9}$

13. If 2 men can do a piece of work in 6 days, how many men can do it in 4 days? In 3 days?

14. $\frac{1}{2}$ of 3 is $\quad$ $\frac{1}{2}$ of 5 is $\quad$ $\frac{1}{2}$ of 7 is $\quad$ $\frac{1}{2}$ of 9 is

15. In an oblong 10 in. by 3 in., how many half-inch squares in each row? How many rows are there?

16. Compare: $\frac{2}{3}$ with $\frac{1}{3}$ $\quad$ $\frac{1}{7}$ with $\frac{2}{7}$ $\quad$ $\frac{3}{5}$ with $\frac{1}{5}$

17. In a rectangle 2 ft. by 10 in., how many 2-inch squares in each row? How many rows are there?

18. A rectangle contains 84 square inches. If there are seven rows, how many squares are there in each row?

LESSON 22

1. Divide 394,685 by 5. 2. Multiply 679,843 by 8.

3. Divide 431,058 by 6. 4. Multiply 763,895 by 7.

5. From 46 yd. 1 ft. 4 in. subtract 28 yd. 2 ft. 9 in.

6. From 31 bu. 3 pk. 4 qt. subtract 17 bu. 3 pk. 6 qt.

7. A farmer sold sheep at $5 a head for $925. How many did he sell?

8. A lady bought 7 pairs of gloves at $1.75 a pair. How much did she pay for them?

9. A man sold 1 fifth of his wheat for $268.75. At the same price, how much is the rest worth?

10. A miller sold 468 barrels of flour to one man, 545 barrels to another, 278 barrels to another, and had 895 barrels left. How many barrels did he have at first?

LESSON 23

1. 8,763,380 – 1,680,395. 2. Multiply 786,549 by 6.

3. 7,463,392 – 1,372,546. 4. Divide 5,792,502 by 6.

5. At $6 an acre, how many acres of land cost $1440?

6. At six cents a quart, how many quarts of strawberries cost $15?

7. How much must be added to 43 bu. 2 pk. 6 qt. to make 62 bu. 1 pk.?

8. Add 16 yd. 2 ft. 4 in., 27 yd. 11 in., 19 yd. 2 ft. 9 in., 24 yd. 2 ft., 18 yd. 1 ft., and 16 yd. 8 in.

9. A boy raised 785 quarts of strawberries, which he sold at 9 cents a quart. How much did he get for them?

10. A farmer raised 986 bushels of wheat, 648 bushels of corn, 845 bushels of oats, and 86 bushels of rye. How many bushels of grain did he raise?

1. A farmer sold 3 fourths of his cows, and had 8 left. How many did he sell?

2. $\frac{2}{3}$ of 12 is $\frac{3}{4}$ of 20 is $\frac{2}{5}$ of 10 is $\frac{2}{7}$ of 14 is

3. If 3 fourths of a yard of ribbon is worth 45 cents, how much is a yard worth?

4. 6 is $\frac{1}{3}$ of 6 is $\frac{1}{5}$ of 6 is $\frac{1}{7}$ of 6 is $\frac{1}{8}$ of

5. If 1 fifth of a field is 8 acres, how many acres are there in 1 fourth of the field?

6. $\frac{1}{2}$ of 11 is $\frac{1}{2}$ of 13 is $\frac{1}{2}$ of 15 is $\frac{1}{2}$ of 17 is

7. A man sold 1 seventh of his sheep at $3 a head for $75. How many did he have left?

8. In an oblong 2 ft. by 5 in., how many square inches in each row? How many rows are there?

9. A rectangle contains 75 sq. in. If there are 5 rows of squares, how many are there in each row?

10. In a rectangle 1 yd. by 9 in., how many square inches in each row? How many rows are there?

11. A farmer sold 20 sheep to each of three men and had $\frac{1}{4}$ as many left. How many did he have at first?

$$\begin{array}{rrr} \text{gal.} & \text{qt.} & \text{pt.} \\ 3 & 2 & 1 \\ & & 3 \\ \hline 10 & 3 & 1 \end{array}$$

1 pt. × 3 = 3 pt., which is 1 qt. and 1 pt. 2 qt. × 3 = 6 qt. 6 qt. and 1 qt. = 7 qt., which is 1 gal. and 3 qt. 3 gal. × 3 = 9 gal. 9 gal. and 1 gal. are 10 gal.

1. $$\begin{array}{rrr} \text{gal.} & \text{qt.} & \text{pt.} \\ 4 & 3 & 1 \\ & & 5 \\ \hline \end{array}$$

2. $$\begin{array}{rrr} \text{yd.} & \text{ft.} & \text{in.} \\ 6 & 2 & 8 \\ & & 4 \\ \hline \end{array}$$

3. $$\begin{array}{rrr} \text{bu.} & \text{pk.} & \text{qt.} \\ 5 & 2 & 6 \\ & & 7 \\ \hline \end{array}$$

4. $$\begin{array}{rrr} \text{gal.} & \text{qt.} & \text{pt.} \\ 5 & 2 & 1 \\ & & 7 \\ \hline \end{array}$$

5. $$\begin{array}{rrr} \text{yd.} & \text{ft.} & \text{in.} \\ 4 & 1 & 6 \\ & & 8 \\ \hline \end{array}$$

6. $$\begin{array}{rrr} \text{bu.} & \text{pk.} & \text{qt.} \\ 6 & 3 & 5 \\ & & 9 \\ \hline \end{array}$$

LESSON 24

1. Multiply 8 yd. 2 ft. 7 in. by 4. 2. 5,947,386 × 8.

3. Multiply 6 bu. 3 pk. 6 qt. by 6. 4. 8,754,690 ÷ 7.

5. Multiply 7 gal. 3 qt. 1 pt. by 5. 6. 5,048,099 ÷ 7.

7. Add $5.43, $.78, $6.67, $7.09, $.58, and $7.86.

8. I paid $375 for a horse, and $185 less for a carriage. Find the cost of both.

9. Each of seven barrels contains 24 gal. 3 qt. 1 pt. of oil. How much do all contain?

10. A man sold 5 houses, each for the same sum, receiving $32,500 for them. Find the price of each.

11. A merchant bought 8 pieces of ribbon, each piece containing 19 yd. 2 ft. 6 in. How much did he buy?

LESSON 25

1. 4268 is 792 less than what? 2. 2,784,565 ÷ 7.

3. Multiply 7 bu. 2 pk. 5 qt. by 5. 4. 3,596,425 ÷ 7.

5. From 57 bu. subtract 29 bu. 2 pk. 6 qt.

6. A merchant sold 6 pairs of shoes at the same price for $27. What was the price per pair?

7. A man sold 1 fourth of his farm for $2675. At the same price, how much is the rest worth?

8. A grocer made a profit of $76.85 on tea and coffee which he sold for $342. How much did it cost?

9. Add sixty million sixty thousand sixty, 8479, nine hundred thousand nine hundred eighty-four, 86,458, and seven million seven thousand seven.

10. A lady spent $7.50 for a hat, twenty-four dollars for a dress, $16.25 for a cloak, $1.75 for gloves, and had $43.65 left. How much did she have at first?

1.	78	56	68	85	92	64	53	76	93	46
	+9	39	37	76	77	86	98	58	67	48

2. Compare : $\frac{1}{3}$ with $\frac{1}{6}$ $\frac{1}{9}$ with $\frac{2}{3}$ $\frac{8}{9}$ with $\frac{4}{9}$

3. Compare : $\frac{3}{7}$ with $\frac{6}{7}$ $\frac{2}{7}$ with $\frac{1}{7}$ $\frac{2}{9}$ with $\frac{4}{9}$

4. $\frac{1}{3} + \frac{4}{9}$ $\frac{1}{3} - \frac{1}{9}$ $\frac{3}{4} - \frac{1}{8}$ $\frac{5}{9} - \frac{1}{3}$

In column addition, when the sum at any point is even tens, as 10, 20, 30, two or more figures in advance should always be grouped, and their sum added to the sum already obtained. If the sum at any point is 30, and the next figures are 8 and 7, or 5, 3, and 7, pupils should think 30, 45. It is very desirable to get even tens. Often this may be done by adding the second or third figure in advance. If the sum at any point is 26, and the next figures in order are 7, 4, 8, or 7, 8, 4, pupils should think 26, 30, 45, first adding 4 to 26, and then adding 15 to 30. If the sum is 29, and the next figures are 9 and 8, pupils should think 29, 30, 46, taking 1 from the 9 to make 30, and then adding 16 to 30.

EXERCISES IN ADDITION

5	9	5	6	7	6	3	8	4	4	6	4
3	6	2	5	3	4	1	4	8	3	4	1
2	4	7	8	6	8	9	6	6	7	7	6
6	4	8	3	5	5	7	2	5	6	5	9
8	2	5	7	6	7	9	3	5	6	8	6
6	8	8	8	5	5	5	7	6	5	6	9
6	6	5	2	4	2	5	4	3	4	3	4
4	5	2	8	6	7	7	3	8	7	8	3
4	2	8	8	4	8	9	6	7	5	7	9
2	8	5	5	7	3	2	2	3	4	5	7
8	7	4	4	3	9	8	8	7	5	3	2
7	3	6	5	4	7	8	7	1	7	7	8
5	8	5	4	5	6	9	4	5	7	7	9
2	5	7	8	3	9	4	3	7	8	6	5
a	*b*	*c*	*d*	*e*	*f*	*g*	*h*	*i*	*j*	*k*	*l*

LESSON 26

1. 13,496 ÷ 7. **2.** $.09 × 586. **3.** $6.87 × 7.

4. 57,330 ÷ 7. **5.** $51 ÷ $.06. **6.** $5.95 ÷ 7.

7. A lady bought 6 pairs of gloves for $5.28. What was the price of each pair?

8. Goods that cost $1246 were sold at a loss of $472. How much was received for them?

9. A dealer sold to each of eight men 365 barrels of flour. How many barrels did he sell?

10. A man paid $7775 for a house and $3275 less for a farm. How much did he pay for both?

11. A man sold a farm for $7525 and lost $1275. How much would he have received for it, if he had gained two thousand four hundred seventy-five dollars?

LESSON 27

1. 8,549,524 – 2,801,578. **2.** 4,930,000 – 3,984,204.

3. 5,745,212 – 5,066,009. **4.** 6,511,091 – 2,961,645.

5. How many papers, at 7¢ apiece, cost $5.95?

6. Add 3647, 7489, 9845, 4859, 7384, 8465, and 8697.

7. If 6 acres of land cost $750, how much would 4 acres cost at the same price?

8. Harry has 145 marbles, which is 48 less than his brother has. How many have both?

9. Add 7 bu. 1 pk. 7 qt., 9 bu. 6 qt., 8 bu. 3 pk. 5 qt., 6 bu. 1 pk., 14 bu. 3 pk. 7 qt., and 16 bu. 6 qt.

10. A man earns $27 a week, which is six times as much as his son earns. How much do both earn?

11. A man bought a house for $4750, which was 1 fourth of his money. How much did he have left?

1. A lady cut some pies into quarters and had 24 pieces. How many pies did she cut?

2. How many 5-cent postage stamps cost $5.75?

3. When 2 dozen eggs cost 48 cents, how much must I pay for 3 fourths of a dozen?

4. $\frac{1}{4}+\frac{7}{8}$ $\frac{3}{4}-\frac{1}{8}$ $\frac{1}{2}+\frac{3}{4}$ $\frac{7}{8}-\frac{3}{4}$

5. When potatoes are worth 60 cents a bushel, what part of a bushel is worth 15 cents?

6. Compare: $\frac{3}{8}$ with $\frac{1}{2}$ $\frac{3}{8}$ with $\frac{1}{8}$ $\frac{1}{8}$ with $\frac{5}{8}$

7. A boy lost 8 marbles, which was 1 seventh of all he had. How many did he have left?

8. $\frac{1}{2}$ of 19 is $4\frac{1}{2}=\frac{?}{2}$ $\frac{5}{4}=?$ $\frac{1}{2}$ of 20 is

9. If 1 eighth of a piece of ribbon is worth 20 cents, how much is half the piece worth?

10. $\frac{3}{4}$ of 24 is $\frac{3}{4}$ of 28 is $\frac{3}{4}$ of 32 is $\frac{3}{4}$ of 36 is

11. A rectangle contains 100 sq. ft. If there are 20 sq. ft. in each row, how many rows are there?

12. $\frac{1}{2}+\frac{5}{8}$ $\frac{7}{8}-\frac{1}{2}$ $\frac{1}{2}+\frac{7}{8}$ $\frac{5}{8}-\frac{1}{2}$

13. If 2 men can do a piece of work in 12 days, how many men can do it in 4 days? In 8 days?

14. Compare: $\frac{1}{2}$ with $\frac{5}{8}$ $\frac{3}{4}$ with $\frac{1}{8}$ $\frac{1}{2}$ with $\frac{7}{8}$

15. If a grocer is selling 3 pounds of raisins for 50 cents, how much would I have to pay for 15 pounds?

16. $\frac{5}{6}$ of 12 is $\frac{5}{6}$ of 18 is $\frac{5}{6}$ of 24 is $\frac{5}{6}$ of 30 is

17. In a rectangle 20 in. by 7 in., how many half-inch squares in each row? How many rows are there?

18. A man divided a piece of land into 3 equal parts and sold one part. What part of the piece was left?

LESSON 28

1. Divide 7,956,984 by 8. 2. Multiply 9,873,645 by 7.

3. Divide 6,874,152 by 8. 4. Multiply 8,435,479 by 8.

5. From 34 gal. 2 qt. subtract 9 gal. 3 qt. 1 pt.

6. Add $4.85, $96.14, $.85, $9.87, $74.50, and $5.58.

7. If each of nine men digs 18 bu. 3 pk. of potatoes, how many will all dig?

8. My carriage cost $275 and my horses three times as much. Find the cost of both.

9. If 1 sixth of a piece of land is worth $265, how much is the whole piece worth?

10. At four cents a pound, how many pounds of sugar will cost one hundred eighty dollars?

11. A lady paid $9.68 for a dress, $6.45 for a hat, and had $18 left. How much did she have at first?

LESSON 29

1. 9,092,073 – 3,884,997. 2. 5,763,415 ÷ 7.

3. 9,577,160 – 6,753,213. 4. 4,560,040 ÷ 8.

5. Multiply 6 gal. 2 qt. 1 pt. by 4. 6. 5,863,456 ÷ 8.

7. A man worked eight days at $1.85 a day. How much did he receive?

8. A man lost $975 on his farm, which he sold for $6250. How much did it cost?

9. A boy had $32. He spent $8.75 for clothes and $3.65 for shoes. How much did he have left?

10. A grocer bought tea for $58 and coffee for $46. If he sells both for $132.85, how much will he gain?

11. From a barrel containing 45 gal. 3 qt. of oil, a grocer sold 28 gal. 2 qt. 1 pt. How much was left?

1. A boy lost 4 fifths of his marbles and had 15 left. How many did he lose?

2. $\frac{1}{2}+\frac{1}{3}$ $\frac{2}{3}-\frac{1}{2}$ $\frac{1}{2}+\frac{1}{6}$ $\frac{1}{2}-\frac{1}{3}$

3. If 1 fifth of a bag of flour weighs 5 pounds, how much do seven bags weigh?

4. Compare: $\frac{1}{6}$ with $\frac{1}{2}$ $\frac{8}{9}$ with $\frac{2}{9}$ $\frac{2}{9}$ with $\frac{2}{3}$

5. If three pounds of rice cost 25 cents, how much would you have to pay for 27 pounds?

6. $\frac{1}{2}$ of 22 is $\frac{1}{2}$ of 26 is $\frac{1}{2}$ of 24 is $\frac{1}{2}$ of 28 is

7. A man sold 5 sheep for $35. At the same price, how much would he receive for 20 sheep?

8. 20 yards are — feet. 75 feet are — yards.

9. If a man receives $1 for 2 thirds of a day's work, how much will he receive for 4 days' work?

10. $\frac{1}{3}+\frac{5}{6}$ $\frac{1}{2}-\frac{1}{6}$ $\frac{1}{2}+\frac{2}{3}$ $\frac{2}{3}-\frac{1}{2}$

11. If a lady cuts a dozen oranges into thirds, to how many children can she give two pieces each?

12. Compare: $\frac{4}{9}$ with $\frac{2}{9}$ $\frac{1}{3}$ with $\frac{4}{9}$ $\frac{2}{3}$ with $\frac{1}{9}$

13. In a rectangle 4 ft. by 1 ft., how many 2-inch squares in each row? How many rows are there?

$$\begin{array}{rrrr} & \text{gal.} & \text{qt.} & \text{pt.} \\ 3) & 20 & 2 & 1 \\ \hline & 6 & 3 & 1 \end{array}$$

$\frac{1}{3}$ of 18 gal. is 6 gal. 2 gal. = 8 qt. 8 qt. and 2 qt. are 10 qt. $\frac{1}{3}$ of 9 qt. is 3 qt. 1 qt. = 2 pt. 2 pt. and 1 pt. are 3 pt. $\frac{1}{3}$ of 3 pt. is 1 pt.

1. $\begin{array}{rrrr} & \text{gal.} & \text{qt.} & \text{pt.} \\ 5) & 24 & 1 & 1 \\ \hline \end{array}$ **2.** $\begin{array}{rrrr} & \text{yd.} & \text{ft.} & \text{in.} \\ 4) & 18 & 1 & 4 \\ \hline \end{array}$ **3.** $\begin{array}{rrrr} & \text{bu.} & \text{pk.} & \text{qt.} \\ 3) & 17 & 3 & 5 \\ \hline \end{array}$

4. $\begin{array}{rrrr} & \text{gal.} & \text{qt.} & \text{pt.} \\ 7) & 23 & 2 & 1 \\ \hline \end{array}$ **5.** $\begin{array}{rrrr} & \text{yd.} & \text{ft.} & \text{in.} \\ 6) & 16 & 2 & 6 \\ \hline \end{array}$ **6.** $\begin{array}{rrrr} & \text{bu.} & \text{pk.} & \text{qt.} \\ 5) & 19 & 3 & 3 \\ \hline \end{array}$

LESSON 30

1. Divide 8 yd. 2 ft. by 3. **2.** 7,856,946 × 9.

3. Divide 8 bu. 1 pk. by 6. **4.** 4,587,656 ÷ 8.

5. Divide 9 gal. 2 qt. by 4. **6.** 6,213,472 ÷ 8.

7. Add 16 yd. 2 ft. 7 in., 9 yd. 1 ft., 24 yd. 10 in., and 18 yd. 2 ft. 8 in.

8. At five cents a quart, how much will eighty-six gallons of milk cost?

9. At eight cents a yard, how many yards of muslin will cost twelve dollars?

10. A man bought a house for $ 6750, which was 3 fifths of his money. How much did he have left?

11. A man divided 9 gal. 2 qt. 1 pt. of milk equally among 7 poor families. How much did each receive?

LESSON 31

1. 8,836,851 – 5,441,774. **2.** 8,817,015 – 3,860,329.

3. 9,153,096 – 2,345,108. **4.** 3,013,742 – 2,607,685.

5. From 42 yd. 2 ft. 4 in. subtract 17 yd. 1 ft. 8 in.

6. Divide 18 bu. 1 pk. 6 qt. by 5. **7.** 5,435,000 ÷ 8.

8. If A has 168 acres of land and B has six times as much, how many acres have both?

9. Add 16 gal. 2 qt. 1 pt., 9 gal. 1 qt. 1 pt., 7 gal. 3 qt., 4 gal. 1 pt., and 3 gal. 2 qt. 1 pt.

10. A man sold 248 quarts of berries, which was $\frac{2}{5}$ of his crop. How many quarts did he raise?

11. A man bought fruit for $ 876.75 and sold it at a gain of $ 188.48. How much did he get for it?

12. A merchant cut a piece of ribbon containing 17 yd. 1 ft. into 8 equal pieces. How long was each piece?

1. How many dozen pencils can you buy for 24 cents at half a cent apiece?

2. At 36 cents a dozen, how many eggs cost 90 cents?

3. If five yards of silk cost $8, how much would 3 fourths of a yard cost?

4. $\frac{1}{3}+\frac{4}{9}$ $\frac{2}{3}-\frac{5}{9}$ $\frac{1}{3}+\frac{8}{9}$ $\frac{8}{9}-\frac{2}{3}$

5. If seven pounds of sugar cost 40 cents, how many pounds can be bought for $1.20?

6. Compare: $\frac{2}{5}$ with $\frac{3}{5}$ $\frac{4}{5}$ with $\frac{2}{5}$ $\frac{2}{7}$ with $\frac{5}{7}$

7. If $\frac{1}{2}$ of a piece of ribbon is worth 24 cents, how much is 3 fourths of it worth?

8. 10 is $\frac{1}{2}$ of $5\frac{1}{2}=\frac{?}{2}$ $\frac{8}{3}=?$ 11 is $\frac{1}{2}$ of

9. A boy sold papers at 4 cents apiece, receiving $5 for them. How many papers did he sell?

10. $\frac{1}{2}$ of 30 is $\frac{1}{2}$ of 36 is $\frac{1}{2}$ of 32 is $\frac{1}{2}$ of 40 is

11. A man bought a coat for $12, which was 2 fifths of his money. How much did he have left?

12. 12 is $\frac{1}{2}$ of 13 is $\frac{1}{2}$ of 14 is $\frac{1}{2}$ of 15 is $\frac{1}{2}$ of

13. In a rectangle 25 ft. by 4 ft., how many square feet in each row? How many rows are there?

14. 10 is $\frac{2}{3}$ of 12 is $\frac{2}{3}$ of 14 is $\frac{2}{3}$ of 16 is $\frac{2}{3}$ of

15. Into how many square inches can you cut an oblong of paper 9 inches long and 7 inches wide?

16. $\frac{1}{3}+\frac{7}{9}$ $\frac{7}{9}-\frac{1}{3}$ $\frac{1}{3}+\frac{2}{9}$ $\frac{2}{3}-\frac{1}{9}$

17. A rectangle contains 120 sq. in. If there are 20 sq. in. in each row, how many rows are there?

18. Compare: $\frac{2}{7}$ with $\frac{6}{7}$ $\frac{3}{5}$ with $\frac{4}{5}$ $\frac{6}{7}$ with $\frac{2}{7}$

19. If 2 men can do a piece of work in 14 days, in how many days can 4 men do it? 7 men? 1 man?

LESSON 32

1. $38 ÷ 8. 2. $.09 × 346. 3. 7,658,904 ÷ 6.
4. $.96 × 8. 5. $58 ÷ $.08. 6. 7,542,872 ÷ 8.

7. Add $.64, $86.14, $43.76, $48, $7.78, and $47.53.

8. A lady bought 4 yards of silk, paying $3.76 for it. Find the price per yard.

9. If a man sells 8 gal. 3 qt. 1 pt. of milk each day, how much does he sell in six days?

10. A man sold his farm for $8250, which is $1625 more than he paid for it. Find the cost.

11. A merchant sold 3 fifths of a piece of silk for $84.75. At the same price, what is the rest worth?

12. If a young man spends $265 of his yearly salary for board, $180 for clothes, $75 for other expenses, and saves $680, how much is his salary?

LESSON 33

1. Multiply 42 yd. 8 in. by 6. 2. 745,986 × 7.
3. Subtract $42.78 from $521. 4. 412,536 ÷ 8.
5. Divide 31 yd. 2 ft. 8 in. by 4. 6. 378,120 ÷ 8.

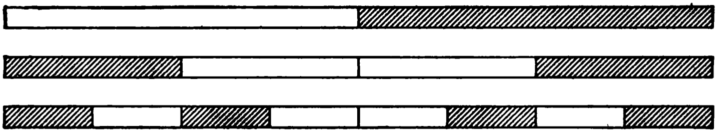
7. Add 9876, 8769, 7698, 6987, 8473, 7395, and 4826.

8. A man bought land for $6452 and sold it for $5575. How much did he gain or lose?

9. A man sold berries at 6 cents a quart, receiving $27 for them. How many quarts did he sell?

10. A farmer sold 2 fifths of his wheat for $385. At the same price, what will he receive for the rest?

11. Add four hundred eight million seventy thousand six, 687,985, seventy thousand five hundred, 8643, and sixty-five thousand four hundred ninety-seven.



1. 79 56 72 87 55 86 43 45 98 69
+8 75 68 46 66 77 67 96 87 78

2. A man sold 4 fifths of his farm. Compare the part left with the part sold.

3. $\frac{1}{3}+\frac{1}{6}$ $\frac{1}{2}-\frac{1}{3}$ $\frac{5}{6}-\frac{2}{3}$ $\frac{1}{3}-\frac{1}{6}$

4. If half a yard of ribbon is worth 25 cents, how much would $4\frac{1}{2}$ yards cost?

5. Compare: $\frac{1}{4}$ with $\frac{3}{4}$ $\frac{5}{8}$ with $\frac{1}{8}$ $\frac{3}{8}$ with $\frac{5}{8}$

6. If 5 eighths of a barrel of flour is worth $2.50, what is the value of 8 barrels?

7. 16 is $\frac{1}{2}$ of   17 is $\frac{1}{2}$ of   18 is $\frac{1}{2}$ of   19 is $\frac{1}{2}$ of

8. A dealer sold 4 tons of coal for $24. At the same price, how much will 8 tons cost?

9. $\frac{1}{3}$ of 10 is $\frac{1}{3}$ of 11 is $\frac{1}{3}$ of 13 is $\frac{1}{3}$ of 14 is

10. At 5 cents a pint, how much would you have to pay for 7 quarts and a pint of berries?

11. 7 is $\frac{1}{8}$ of   7 is $\frac{1}{9}$ of   8 is $\frac{1}{8}$ of   8 is $\frac{1}{9}$ of

12. How many pieces of ribbon, each half a yard long, can be cut from a piece $7\frac{1}{2}$ yards long?

13. $\frac{1}{2}+\frac{3}{8}$ $\frac{1}{2}-\frac{1}{4}$ $\frac{1}{4}+\frac{5}{8}$ $\frac{1}{4}-\frac{1}{8}$

14. If 6 cents is 1 eighth of my money, how much can I spend and have 1 fourth of my money left?

15. Compare: $\frac{3}{8}$ with $\frac{3}{4}$ $\frac{7}{8}$ with $\frac{1}{8}$ $\frac{5}{8}$ with $\frac{3}{4}$

16. An oblong contains 60 half-inch squares. If there are 5 rows, how many squares are there in each row?

LESSON 34

1. Multiply 58,398 by 7. **2.** Divide 6,084,708 by 7.

3. Multiply 47,859 by 8. **4.** Divide 7,654,320 by 8.

5. At $6 a head, what is the value of 268 sheep?

6. How many pencils, at four cents apiece, cost $19?

7. From 72 bu. 2 pk. 3 qt. subtract 28 bu. 3 pk. 6 qt.

8. Multiply eighty-seven million eighty-nine thousand eighty-six by seven.

9. A man sold 8 barrels of apples at the same price for $26. Find the price per barrel.

10. A farmer sold $\frac{1}{7}$ of his wool for $68.75. At the same price, how much is half the rest worth?

11. If a man receives $1550 for his potatoes and $286 less for his wheat, how much does he get for both?

LESSON 35

1. 9,716,004 – 1,975,208. **2.** 7,495,305 – 3,698,046.

3. 9,401,512 – 8,992,049. **4.** 8,009,391 – 5,684,735.

5. Add 7362, 2637, 3748, 7384, 8473, 4859, and 9584.

6. Divide 53 gal. 1 qt. 1 pt. by 7. **7.** 684,584 ÷ 8.

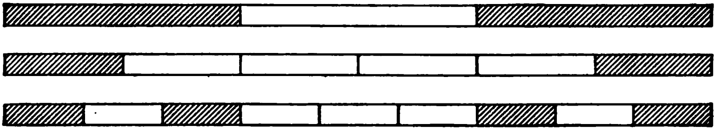
8. At ninety-five cents a bushel, how much will nine bushels of potatoes cost?

9. Add 5 yd. 2 ft. 7 in., 8 yd. 1 ft. 9 in., 7 yd. 11 in., 9 yd. 2 ft., and 4 yd. 1 ft. 10 in.

10. If a man divides 14 bu. 3 pk. 4 qt. of potatoes equally among 7 men, how many does each get?

11. A farmer sold his wheat for $476 and his potatoes for twice as much. How much did he get for both?

12. A man has two hundred twenty-five sheep. How many must he buy to have three hundred seventy-two?



1. $\frac{1}{3}+\frac{5}{9}$ $\frac{1}{3}-\frac{2}{9}$ $\frac{2}{3}-\frac{4}{9}$ $\frac{5}{9}-\frac{1}{3}$

2. A rectangle contains 84 square inches. If it is 7 inches wide, how long is it?

3. $\frac{1}{2}$ of 42 is $6\frac{1}{2}=\frac{?}{2}$ $\frac{9}{4}=?$ $\frac{1}{2}$ of 44 is

4. At 5 cents apiece, how many pencils can I buy for five dimes and a 5-cent piece?

5. Compare: $\frac{2}{9}$ with $\frac{1}{9}$ $\frac{2}{3}$ with $\frac{2}{9}$ $\frac{1}{3}$ with $\frac{1}{2}$

6. How much must I pay for 35 pounds of sugar, at the rate of 7 pounds for 40 cents?

7. 8 bushels are — pecks. 80 pecks are — bushels.

8. At the rate of 80 cents a bushel, how much would a peck and 4 quarts of nuts cost?

9. $\frac{1}{5}$ of 2 is $\frac{1}{5}$ of 3 is $\frac{1}{5}$ of 4 is $\frac{1}{5}$ of 6 is

10. If 1 sixth of a piece of land is worth $25, how much is 2 thirds of the piece worth?

11. 21 is $\frac{1}{2}$ of 22 is $\frac{1}{2}$ of 23 is $\frac{1}{2}$ of 24 is $\frac{1}{2}$ of

12. How many pieces of wire 1 third of a yard long can be cut from a piece $6\frac{2}{3}$ yards long?

13. $\frac{1}{3}+\frac{1}{9}$ $\frac{4}{9}-\frac{1}{3}$ $\frac{2}{3}-\frac{2}{9}$ $\frac{1}{3}-\frac{1}{9}$

14. If 2 men can do a piece of work in 15 days, how many men can do it in 6 days? In 3 days?

15. Compare: $\frac{1}{3}$ with $\frac{5}{6}$ $\frac{2}{3}$ with $\frac{8}{9}$ $\frac{1}{6}$ with $\frac{2}{3}$

16. In a rectangle 5 ft. by 9 in., how many square inches in each row? How many rows are there?

17. I bought 4 dozen oranges for $1.20. At the same price, how much must I pay for 2 thirds of a dozen?

LESSON 36

1. ~~Divide 4,3~~21,009 by 7. ~~2. $.06 × 638.~~

3. Divide 7,645,032 by 8. 4. $.08 × 458.

5. What cost 268 yards of muslin at six cents a yard?

6. Add $7.38, $45, $39.18, $.65, $4.45, and $9.48.

7. Add 2634, 3647, 4758, 9283, 8375, 2759, and 4837.

8. At 65 cents a bushel, how much will a grocer get for 8 bushels of potatoes?

9. Add 43 bu. 2 pk. 4 qt., 46 bu. 7 qt., 45 bu. 3 pk., 44 bu. 6 qt., and 32 bu. 2 pk. 4 qt.

10. A man bought sheep at $4 a head, paying $540 for them, and sold them at $6 a head. Find the gain.

11. A man bought two farms for $12,650, paying $8675 for one. How much did he pay for the other?

LESSON 37

1. Divide 42 yd. 1 ft. 11 in. by 5. 2. 926,485 × 7.

3. Multiply 46 bu. 1 pk. 4 qt. by 6. 4. 658,739 × 8.

5. How many quarts are there in 164 pecks?

6. From 37 gallons subtract 18 gallons 2 quarts 1 pint.

7. Add 7648, 5894, 6295, 7348, 4567, 3725, and 5984.

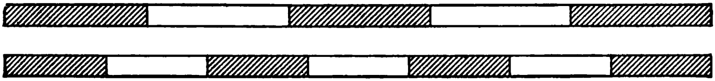
8. A man sold a house for $8650, which is $850 less than he paid for it. Find the cost.

9. Harry earned $16 a month, and Frank earned $8.25 less. How much did both earn?

10. A butcher received $214 for beef, which he sold at 8 cents a pound. How much did he sell?

11. If 2 sevenths of a piece of land is worth $675, what is the rest of it worth at the same price?

3
5
16



1. At 2 cents apiece, how many dozen lemons can you buy for $1.20?

2. $\frac{1}{5}+\frac{3}{5}$ $\frac{4}{7}-\frac{1}{7}$ $\frac{3}{5}+\frac{4}{5}$ $1\frac{3}{7}-\frac{6}{7}$

3. At 6 cents apiece, for how many pencils does a dealer receive $12.54?

4. Compare: $\frac{3}{7}$ with $\frac{4}{7}$ $\frac{2}{5}$ with $\frac{1}{5}$ $\frac{1}{5}$ with $\frac{4}{5}$

5. How many square inches are there in an oblong 18 inches long and 5 inches wide?

6. $\frac{1}{2}$ of 46 is $\frac{2}{5}$ of 2 is $\frac{2}{5}$ of 3 is $\frac{1}{2}$ of 48 is

7. At 25 cents a pound, how many pounds of coffee can be bought for $1.75? For $2.25?

8. $\frac{2}{5}+\frac{4}{5}$ $\frac{6}{7}-\frac{3}{7}$ $\frac{4}{7}+\frac{6}{7}$ $1\frac{1}{5}-\frac{3}{5}$

9. How many half-inch squares are there in a rectangle 10 inches long and 3 inches wide?

10. If 11 marbles are $\frac{1}{7}$ of all a boy has, how many can he lose and have 3 sevenths of his marbles left?

MULTIPLICATION BY MORE THAN ONE FIGURE

```
 628
  46
3768
2512
28888
```

628 × 46 means 6 628's + 40 628's. 628 × 6 = 3768. 628 × 4 = 2512. We wish 40 628's instead of 4 628's, hence we must multiply 2512 by 10. 2512 × 10 = 25120. In adding 25120 to 3768, we do not write the 0 but place the first figure under the figure by which we multiply.

507	875	390	608	480
85	88	76	59	84
2535	7000	2340	5472	1920
4056	7000	2730	3040	3840
43095	77000	29640	35872	40320

LESSON 38

1. 807 × 58. **2.** $.38 × 75. **3.** 6,870,234 ÷ 7.

4. 956 × 49. **5.** $.85 × 68. **6.** 5,271,384 ÷ 8.

7. At six dollars apiece, how many hats cost $510?

8. Add 5763, 8456, 4875, 6948, 2597, 2843, and 7658.

9. John has a cord 16 yd. 2 ft. 8 in. long. How much more will make it 24 yards long?

10. Seven yards of silk cost thirty-two dollars seventy-six cents. Find the price per yard.

11. A dealer bought coal for $4865 and sold it at a profit of $986.75. How much did he get for it?

12. A farmer raised 684 bushels of wheat and sold it at $.86 a bushel. How much did he get for it?

13. A merchant sold 7 pieces of silk, each piece containing 28 yd. 1 ft. 6 in. How many yards did he sell?

LESSON 39

1. 3,483,831 – 2,639,753. **2.** 5,278,751 – 1,668,946.

3. 8,059,000 – 4,700,312. **4.** 9,363,145 – 5,380,089.

5. Divide 143 bu. 2 pk. 4 qt. by 4. **6.** 3,746,526 ÷ 7.

7. If 8 barrels of flour cost $34, how much will 75 barrels cost at the same price?

8. Add 5 bu. 3 pk. 7 qt., 4 bu. 2 pk. 5 qt., 3 bu. 1 pk., 2 bu. 6 qt., and 8 bu. 3 pk. 5 qt.

9. A man sold 8 bushels of potatoes at the same price for $6.80. Find the price per bushel.

10. A merchant sold goods for $2453 and gained $516.60. How much did the goods cost?

11. A man sold 1 seventh of his farm for $1875. At the same price, how much is half the remainder worth?

1. 58 49 84 78 47 76 54 86 37 73
$+9$ 74 65 64 28 85 37 79 48 67

2. 13 16 18 14 17 15 21 24 22 23
$\times 2$ 2 2 2 2 2 2 2 2 2

3. 20 30 20 30 20 30 20 30 20 30
$\times 2$ 2 3 3 4 4 5 5 6 6

4. When 4 yards of velvet cost $12, how much must a lady pay for $\frac{3}{4}$ of a yard?

5. $\frac{1}{4}+\frac{7}{8}$ $\frac{3}{4}-\frac{1}{8}$ $\frac{1}{2}+\frac{3}{4}$ $\frac{7}{8}-\frac{3}{4}$

6. At 20 cents a foot, how much would you have to pay for 2 yards of ribbon?

7. $\frac{1}{2}+\frac{5}{8}$ $\frac{7}{8}-\frac{1}{2}$ $\frac{1}{2}+\frac{7}{8}$ $\frac{5}{8}-\frac{1}{2}$

8. If an oblong of paper contains 60 2-inch squares, what may the dimensions of it be?

9. Compare: $\frac{1}{8}$ with $\frac{3}{8}$ $\frac{3}{4}$ with $\frac{3}{8}$ $\frac{1}{4}$ with $\frac{1}{8}$

10. How many 2-inch squares are there in a rectangle 40 inches long and one foot wide?

11. $\frac{1}{2}$ of 50 is $2\frac{1}{4}=\frac{?}{4}$ $\frac{11}{2}=?$ $\frac{1}{2}$ of 52 is

12. If I cut a dozen oranges into thirds, to how many children can I give 2 pieces each?

13. $\frac{1}{6}$ of 2 is $\frac{1}{6}$ of 3 is $\frac{1}{6}$ of 4 is $\frac{1}{6}$ of 5 is

14. If 3 eighths of an acre of land is worth $60, how much are 5 acres worth at the same price?

15. 10 is $\frac{1}{3}$ of 11 is $\frac{1}{3}$ of 12 is $\frac{1}{3}$ of 13 is $\frac{1}{3}$ of

16. A lady bought oranges at five cents apiece, paying $3.25 for them. How many did she buy?

17. Compare: $\frac{1}{4}$ with $\frac{3}{8}$ $\frac{1}{4}$ with $\frac{5}{8}$ $\frac{1}{4}$ with $\frac{7}{8}$

18. A boy spent $\frac{1}{9}$ of his money for a 25-cent ball. How many more can he buy and have $\frac{1}{2}$ of his money left?

LESSON 40

1. Divide 4,505,940 by 6.
2. Multiply 736 by 46.
3. Divide 6,850,039 by 7.
4. Multiply 584 by 58.
5. Divide 4,736,528 by 8.
6. Multiply 947 by 64.
7. Subtract 19 yd. 2 ft. 10 in. from 47 yd. 2 ft.
8. Add $75, $8.75, $.89, $76.43, $58, and $74.48.
9. Add 6273, 7384, 8495, 5948, 4837, 3759, and 7486.

10. Goods that cost $742 were sold at a loss of $153.28. How much was received for them?

11. John earns $45 a month, which is $85 less than his father earns. How much do both earn?

12. A lady paid $8.70 for muslin, which she bought at six cents a yard. How many yards did she buy?

13. A farmer sold 285 bushels of potatoes at sixty-five cents a bushel. How much did he receive for them?

LESSON 41

1. Divide 62 gal. 1 pt. by 7.
2. 5,321,472 ÷ 8.
3. Multiply 18 gal. 1 pt. by 8.
4. 4,000,320 ÷ 9.
5. 9,723,090 – 4,940,338.
6. 7,576,361 – 3,825,617.
7. Add 4563, 2849, 4856, 6273, 3784, 7968, and 4639.

8. If 3 sevenths of a piece of land is worth $840, how much is the whole piece worth?

9. If a merchant sells 111 yards of silk in equal parts to 6 ladies, how much does each buy?

10. A man has $758.64 in his safe and three times as much in the bank. How much has he in both?

11. Add six million six thousand six, four hundred twelve million ninety thousand, and nineteen million four hundred eight thousand nine hundred seven.

1. If 3 pounds of rice cost 25 cents, how many pounds can I buy for $1.75?

2. $\frac{1}{2}+\frac{1}{3}$ $\frac{2}{3}+\frac{1}{2}$ $\frac{1}{2}+\frac{1}{6}$ $\frac{1}{2}-\frac{1}{3}$

3. A grocer sold tea for $60 and gained $15. How much did he pay for it?

4. $\frac{1}{5}$ of 7 is $\frac{1}{5}$ of 8 is $\frac{1}{5}$ of 9 is $\frac{1}{5}$ of 11 is

5. A boy lost 5 eighths of his marbles and had 24 left. How many did he lose?

6. $\frac{1}{2}$ of 54 is $\frac{1}{2}$ of 60 is $\frac{1}{3}$ of 21 is $\frac{1}{3}$ of 24 is

7. A boy sold a ball for 45 cents and lost 15 cents. How much did he pay for it?

8. 24 yards are — feet. 27 feet are — yards.

9. If a horse eats 8 quarts of oats a day, in how many days will he eat 16 bushels?

10. $\frac{1}{3}$ of 8 is 9 is $\frac{1}{3}$ of $\frac{1}{4}$ of 7 is $\frac{1}{4}$ of 9 is

11. If a rectangle one foot long contains ninety-six square inches, how wide is it?

12. $\frac{1}{2}$ of 56 is $\frac{1}{2}$ of 62 is $\frac{1}{2}$ of 58 is $\frac{1}{2}$ of 64 is

13. A piece of ribbon $9\frac{1}{2}$ yards long can be cut into how many pieces half a yard long?

14. $\frac{1}{3}+\frac{5}{6}$ $\frac{1}{2}+\frac{5}{6}$ $\frac{1}{2}+\frac{2}{3}$ $\frac{2}{3}-\frac{1}{6}$

15. If 3 men can do a piece of work in 6 days, in how many days can 9 men do it? 6 men?

16. If a piece of paper is 5 feet long and 6 inches wide, how many square inches does it contain?

17. A farmer sold 7 eighths of his apples and had 6 barrels left. How many barrels did he sell?

18. A lady divided some oranges equally among 3 boys and 5 girls. What part of them did the girls receive?

LESSON 42

1. 9,129,554 – 6,088,598. **2.** 9,400,000 – 6,394,206.

3. 9,391,263 – 1,991,567. **4.** 5,825,750 – 2,527,004.

5. Add 5432, 7587, 8423, 5798, 8746, 7569, and 4765.

6. Multiply five million seventy-five thousand six hundred seventy-eight by nine.

7. A lady bought seven chairs at the same price for $103.25. What was the price of each?

8. A merchant sold 9 yards of silk for $12.15. At the same price, how much are 38 yards worth?

9. A grocer bought of each of 8 farmers 26 bu. 3 pk. of potatoes. How many bushels did he buy of all?

10. A man sold land for $4682 and lost $1218. How much would he have received for it, if he had gained two thousand one hundred dollars?

LESSON 43

1. 7,345,156 – 1,261,449. **2.** 9,402,981 – 5,415,083.

3. 8,040,000 – 7,500,532. **4.** 7,837,737 – 2,390,739.

5. From 45 bu. 3 pk. 3 qt. subtract 16 bu. 7 qt.

6. Divide 50 yd. 2 ft. 10 in. by 7. **7.** 3,821,058 ÷ 9.

8. Add 3547, 2659, 8473, 5948, 6935, 2957, and 6897.

9. Add 3 gal. 2 qt., 5 gal. 1 qt. 1 pt., 4 gal. 1 pt., 9 gal. 3 qt., and 3 qt. 1 pt.

10. A man sold a house for $9800 and lost $2200. How much did he pay for it?

11. A man sold seven bushels of berries at eight cents a quart. How much did he get for them?

12. A lady bought three garments for $59, paying $8.75 for one. How much did she pay for the others?

We unite two or more unequal numbers by *addition;* we find the difference between two numbers by *subtraction;* we unite two or more equal numbers by *multiplication;* we find how many times one number is contained in another by *division;* we find one of the equal parts of a number by *division.*

1. How much sugar, at 8 cents a pound, costs $44?

2. At 3 cents apiece, how many dozen oranges can be bought for $1.80?

3. $\frac{1}{2}$ of 66 is $\frac{1}{2}$ of 68 is $\frac{1}{3}$ of 16 is $\frac{1}{3}$ of 17 is

4. A man sold berries at 8 cents a quart for $28. How many quarts did he sell?

5. $\frac{1}{3}+\frac{4}{9}$ $\frac{2}{3}-\frac{5}{9}$ $\frac{1}{3}+\frac{8}{9}$ $\frac{8}{9}-\frac{2}{3}$

6. If 1 seventh of a piece of land is worth $25, how much is half the rest worth?

7. $\frac{2}{3}$ of 10 is $\frac{2}{3}$ of 15 is $\frac{2}{3}$ of 11 is $\frac{2}{3}$ of 18 is

8. If a man receives $6 for 4 days' labor, how much will he receive for $\frac{4}{5}$ of a day?

9. Compare: $\frac{1}{3}$ with $\frac{5}{9}$ $\frac{2}{3}$ with $\frac{5}{6}$ $\frac{1}{3}$ with $\frac{7}{9}$

10. How many half-inch squares are there in a rectangle 2 feet long and 5 inches wide?

11. 16$\frac{1}{2}$ feet make 1 rod.   2 rods are — feet.

12. A rectangle which contains 120 half-inch squares is 4 inches wide. How long is it?

13. 25 is $\frac{1}{2}$ of   26 is $\frac{1}{2}$ of   14 is $\frac{1}{3}$ of   15 is $\frac{1}{3}$ of

14. If 6 pies are divided equally among 36 children, what part of a pie does each receive?

15. $\frac{1}{3}+\frac{7}{9}$ $\frac{7}{9}-\frac{1}{3}$ $\frac{1}{3}+\frac{2}{9}$ $\frac{2}{3}-\frac{1}{9}$

16. If a grocer is selling 3 quarts of berries for 25 cents, how many quarts could I get for $2.25?

17. A farmer sold 25 sheep to each of 6 men, and had 1 third as many left. How many had he at first?

LESSON 44

1. 658 × 48. **2.** $.75 × 86. **3.** 6,897,345 ÷ 7.

4. 749 × 76. **5.** $.84 × 75. **6.** 3,896,472 ÷ 8.

7. Add $8.47, $16.24, $.78, $7.56, $.67, and $8.64.

8. Add 6789, 7896, 8967, 9678, 2345, 3452, and 4523.

9. A man sold oranges at five cents apiece for $6.75. How many did he sell?

10. A man bought a farm for $6800, which was $\frac{2}{7}$ of his money. How much did he have left?

11. A house that cost $4648 was sold at a gain of $852. How much was received for it?

12. A grocer bought 168 bushels of potatoes at 85 cents a bushel. How much did he pay for them?

13. If there are 265 leaves in a book, how many leaves are there in six copies of the book?

LESSON 45

1. 9,436,645 – 8,765,937. **2.** 7,200,004 – 3,294,208.

3. 9,050,922 – 3,304,159. **4.** 6,595,264 – 1,845,769.

5. Multiply 16 yd. 9 in. by 4. **6.** 639,786 × 7.

7. Divide 259 bu. 1 pk. 2 qt. by 6. **8.** 564,326 ÷ 7.

9. At five cents apiece, how many pencils cost $16?

10. Each of nine men gave $685 to build a church. How much did all give?

11. A man sold eight sheep at the same price for $62. What was the price per head?

12. Add 28 gal. 3 qt. 1 pt., 36 gal. 1 pt., 25 gal. 2 qt., 3 qt. 1 pt., and 24 gal. 2 qt. 1 pt.

13. A man sold a store for $9750, which is $1825 more than he paid for it. How much did he pay for it?

1. $\frac{1}{3}$ of 2 is $\frac{1}{3}$ of 4 is $\frac{1}{3}$ of 5 is $\frac{1}{3}$ of 7 is

2. $\frac{1}{4}$ of 2 is $\frac{1}{4}$ of 3 is $\frac{1}{4}$ of 5 is $\frac{1}{4}$ of 6 is

3. 8 is $\frac{1}{3}$ of 8 is $\frac{1}{4}$ of 8 is $\frac{1}{5}$ of 8 is $\frac{1}{6}$ of

4. $\frac{2}{3}$ of 2 is $\frac{2}{3}$ of 4 is $\frac{2}{3}$ of 5 is $\frac{2}{3}$ of 7 is

5. 4 is $\frac{1}{9}$ of 5 is $\frac{1}{9}$ of 6 is $\frac{1}{9}$ of 8 is $\frac{1}{7}$ of

Suggestions have been given on page 137 for adding any combination of two or more figures whose sum is 10. At this stage pupils should be trained to add more and more in groups. Any group of two or more figures whose sum does not exceed 12 should be added together. In adding any group that makes 11, pupils have simply to remember that the unit figure of the sum is *one more* than the unit figure of the number added to 11; and in adding any group that makes 12, the unit figure of the sum is *two more* than the unit figure of the number added to 12.

EXERCISES IN ADDITION

6	9	7	8	7	5	7	7	6	3	5	9
2	2	6	5	9	6	7	8	7	5	4	3
4	4	5	4	7	8	4	3	3	8	7	9
6	9	6	6	5	7	8	5	4	3	4	3
8	5	1	4	6	5	8	8	8	8	8	2
1	9	8	8	3	7	5	6	4	7	3	5
4	6	5	4	6	2	6	6	8	5	5	9
7	9	7	5	2	8	9	4	7	6	6	6
7	2	4	3	8	4	4	7	5	8	4	4
2	9	7	6	7	4	9	8	6	5	8	9
7	5	3	9	8	7	7	5	9	6	6	7
9	9	6	3	3	8	9	4	7	6	9	9
8	6	6	8	5	5	4	7	6	6	6	4
8	9	1	9	8	7	9	1	5	5	8	9
a	*b*	*c*	*d*	*e*	*f*	*g*	*h*	*i*	*j*	*k*	*l*

LESSON 46

1. Multiply 4869 by 46. 2. Divide 6,897,544 by 8.

3. Multiply 6578 by 78. 4. Divide 7,074,855 by 9.

5. At $.96 a yard, what cost nine yards of ribbon?

6. From 34 gallons 3 quarts subtract 15 gallons 1 pint.

7. Add 6456, 7597, 2569, 7893, 2569, 9687, and 7568.

8. Eight pounds of tea were sold for $5.44. What was the price per pound?

9. Multiply forty million fifty-six thousand seven hundred sixty-nine by nine.

10. A lady paid $5.75 for a pair of shoes, and 6 times as much for a cloak. Find the cost of both.

11. In a certain village there are 875 men, 268 more women than men, and as many children as men and women together. What is the population of the town?

LESSON 47

1. 5,000,293 – 4,531,509. 2. 8,447,731 – 7,457,833.

3. 7,147,183 – 6,771,418. 4. 3,071,985 – 2,506,289.

5. Divide 119 gal. 3 qt. 1 pt. by 7. 6. 637,816 ÷ 8.

7. How much must be added to 48 bu. 6 qt. to make 65 bu. 2 pk. 4 qt.?

8. A lady bought 23 yards of silk at $1.85 a yard. How much did she pay for it?

9. In each of nine cans there is 9 gal. 3 qt. 1 pt. of milk. How much is there in all?

10. A grocer bought 8 bushels of potatoes for $6.80. At the same price, what will 75 bushels cost?

11. A man sold $\frac{1}{7}$ of his potatoes for $84.65. At the same price, how much is half the remainder worth?

144 sq. in. make 1 sq. ft. **9 sq. ft. make 1 sq. yd.**

1.	25	25	25	25	25	25	25	25	26	34
	× 5	6	7	8	9	10	11	12	2	2

2. If 6 peaches cost 10 cents, how much would you have to pay for 3 dozen?

3. How do you unite two or more equal numbers?

4. If 4 fifths of a ton of hay is worth $12, how much must be paid for 4 tons?

5. How do you find one of the equal parts of a number?

6. If your mother has $3\frac{1}{2}$ pies, to how many children can she give 1 sixth of a pie?

7. Compare: $\frac{2}{3}$ with $\frac{7}{9}$ $\frac{3}{4}$ with $\frac{7}{8}$ $\frac{2}{3}$ with $\frac{5}{6}$

8. How many 2-inch squares are there in a rectangle 5 feet long and 10 inches wide?

9. $\frac{2}{3}$ of 21 is $\frac{2}{3}$ of 24 is $\frac{3}{4}$ of 40 is $\frac{3}{4}$ of 44 is

10. If a horse eats a peck of oats a day, how many bushels does he eat in 7 weeks?

11. 6 is $\frac{2}{7}$ of 6 is $\frac{3}{7}$ of 6 is $\frac{2}{5}$ of 6 is $\frac{3}{8}$ of

12. At 25 cents a peck, how much does a grocer receive for 2 bushels and a peck of potatoes?

13. Compare: $\frac{4}{9}$ with $\frac{2}{3}$ $\frac{1}{3}$ with $\frac{8}{9}$ $\frac{5}{9}$ with $\frac{2}{3}$

14. A grocer bought sugar at six cents a pound for $90. How many pounds did buy?

15. If a square foot of zinc is worth 25 cents, how much is a square yard worth at the same price?

16. If 3 men can do a piece of work in 8 days, how many men can do it in 6 days? In 2 days?

17. Show that there are 144 sq. in. in a square foot. Show that there are 9 sq. ft. in a square yard.

LESSON 48

1. 684 × 38. **2.** $.45 × 75. **3.** 5,000,072 ÷ 8.
4. 658 × 65. **5.** $.68 × 54. **6.** 4,732,155 ÷ 9.
7. Add $5, $7.68, $.57, $6.42, $5.48, $6, and $9.85.
8. Add 6273, 7384, 6284, 8495, 7456, 9845, and 6938.

9. If 3 fifths of a piece of silk is worth $26.25, how much is the whole piece worth?

10. A dealer sold 7846 pounds of cheese at 9 cents a pound. How much did he receive for it?

11. If a man divides five bushels of apples equally among 8 boys, how many will each receive?

12. A man has $465 in one bank and 3 times as much, less $146.84, in another. How much has he in both?

13. A farmer received $746 for his wheat and $185.72 less for his potatoes. How much did he receive for both?

LESSON 49

1. 6,270,000 – 5,299,403. **2.** 4,299,652 – 3,489,759.
3. 9,635,194 – 6,670,518. **4.** 9,101,000 – 3,610,624.
5. 8,275,914 – 5,801,489. **6.** 6,573,731 – 2,836,207.
7. Multiply 18 bu. 4 qt. by 4. **8.** 3648 × 26.
9. Divide 369 yd. 1 ft. 8 in. by 8. **10.** 3807 × 35.
11. From 24 yd. 1 ft. 2 in. subtract 8 yd. 2 ft. 7 in.

12. Nine barrels of flour cost $61.65. What was the price per barrel?

13. I lost $475 on a farm, which I sold for $2875. How much did I pay for it?

14. At 65 cents a bushel, how much must a grocer pay for 265 bushels of potatoes?

15. A man gave his son $8225, which is $1475 more than he gave his daughter. What did both receive?

16 ounces make 1 pound. 2000 pounds make 1 ton.

1. If corn costs sixty cents a bushel, how much must be paid for 2 pecks?

2. 6000 pounds are — tons. 10,000 pounds are — tons.

3. If a grocer is selling tea at sixty cents a pound, how much is 4 ounces worth?

4. Compare: $\frac{1}{2}$ with $\frac{5}{8}$ $\frac{1}{2}$ with $\frac{1}{8}$ $\frac{1}{2}$ with $\frac{3}{4}$

5. How many square feet are there in a sidewalk 25 yards long and four feet wide?

6. $\frac{1}{2}$ of 74 is $7\frac{1}{2} = \frac{?}{2}$ $\frac{11}{3} = ?$ $\frac{1}{2}$ of 76 is

7. The ceiling of a hall contains 160 square feet. If it is 20 feet long, how wide is it?

8. 5 sq. yd. are — sq. ft. 81 sq. ft. are — sq. yd.

9. If 5 yards of ribbon are worth $7.50, how much must I pay for 3 fifths of a yard?

10. 9 is $\frac{1}{4}$ of 9 is $\frac{1}{5}$ of 9 is $\frac{1}{6}$ of 9 is $\frac{1}{7}$ of

11. How many bags holding 7 pecks each are required to hold fourteen bushels of wheat?

12. 27 is $\frac{1}{2}$ of 16 is $\frac{1}{3}$ of 28 is $\frac{1}{2}$ of 17 is $\frac{1}{3}$ of

13. At thirty-six cents a pound, how much would you have to pay for 8 ounces of coffee?

14. Compare: $\frac{1}{3}$ with $\frac{4}{9}$ $\frac{1}{3}$ with $\frac{1}{9}$ $\frac{1}{3}$ with $\frac{1}{2}$

15. If there are 10 bushels of wheat in a bin and 24 pecks are taken out, how much is left?

16. I spent 1 ninth of my money for a tie. How many more can I buy and have 2 thirds of my money left?

How do you find one of the equal parts of a number? How do you find 1 sixth of a number? When you know 1 sixth of a number, how do you find 5 sixths of it?

LESSON 50

1. Find $\frac{3}{4}$ of 960. **2.** 485 × 28. **3.** 764,536 ÷ 8.

4. Find $\frac{4}{5}$ of 475. **5.** 735 × 54. **6.** 689,238 ÷ 9.

7. Multiply sixty million seventy thousand eight hundred seventy-six by eight.

8. If 48 sheep are 1 fifth of a man's flock, how many can he sell and have $\frac{2}{5}$ of his flock left?

9. A man bought sheep for $986 and sold them at a profit of $264. How much did he get for them?

10. A farmer raised 685 bushels of wheat and sold $\frac{4}{5}$ of it at $.85 a bushel. How much did he get for it?

11. A man divided his money among his 6 children, giving each one $8750. How much did all receive?

12. A boy had $8.85. He earned $12.45 and bought clothes and shoes for $16.65. How much had he left?

LESSON 51

1. 8,003,947 – 7,318,049. **2.** 7,018,571 – 6,708,903.

3. 5,318,192 – 4,741,625. **4.** 7,673,330 – 3,079,232.

5. 2647 × 37. **6.** 4685 × 45. **7.** 8497 × 68.

8. Find the cost of 228 acres of land at $43 an acre.

9. Add 7 gal. 2 qt. 1 pt., 8 gal. 1 pt., 5 gal. 3 qt., and 4 gal. 1 qt. 1 pt.

10. A man sold 2 thirds of a flock of 375 sheep at $4 a head. How much did he get for them?

11. If $9.68 is $\frac{1}{7}$ of a boy's money, how much can he spend and have 3 sevenths of his money left?

12. Add nineteen million seventy thousand eight hundred, four hundred ninety-five thousand six, 748,634, and seven million sixty thousand seventy.

1.	88	67	34	27	42	75	68	57	75	83
	+9	31	45	66	78	88	87	76	68	77
2.	15	15	15	15	35	45	27	46	37	28
	×2	3	4	5	2	2	2	2	2	2

3. How many 4-cent postage stamps cost $6.40?

4. At half a cent apiece, how many dozen apples can you buy for 30 cents?

5. What square contains 16 sq. in.? 36 sq. in.?

6. At 48 cents a dozen, how much would you have to pay for twenty-five oranges?

7. Compare: $\frac{1}{9}$ with $\frac{1}{3}$ $\frac{2}{3}$ with $\frac{1}{6}$ $\frac{1}{9}$ with $\frac{2}{3}$

8. If you divide a 5-inch square into half-inch squares, how many squares have you?

9. $\frac{1}{3}$ of 36 is $3\frac{2}{3} = \frac{?}{3}$ $\frac{11}{4} = ?$ $\frac{1}{3}$ of 39 is

10. If half a dozen peaches cost a dime, how many dozen can you buy for sixty cents?

11. 10 is $\frac{1}{4}$ of 11 is $\frac{1}{4}$ of 12 is $\frac{1}{4}$ of 14 is $\frac{1}{4}$ of

12. A lady gave 2 thirds of an orange to each of 18 children. How many oranges did she cut?

13. 8 is $\frac{2}{5}$ of 8 is $\frac{4}{5}$ of 9 is $\frac{3}{5}$ of 9 is $\frac{3}{7}$ of

14. If I divide 2 pounds of candy equally among 5 boys and 3 girls, what part of it do the girls get?

15. 2 rods are — feet. 4 rods are — feet.

16. A man spent 6 sevenths of his money for shoes and had 75 cents left. What did the shoes cost?

17. Compare: $\frac{1}{6}$ with $\frac{1}{3}$ $\frac{2}{3}$ with $\frac{1}{9}$ $\frac{1}{6}$ with $\frac{1}{2}$

18. If 5 eighths of a pound of tea is worth 25 cents, what is the value of $5\frac{1}{2}$ pounds at the same price?

19. How many square inches are there in a 2-inch square? In a 3-inch square? In a 5-inch square?

LESSON 52

1. 874 × 35. **2.** 958 × 68. **3.** 6,420,000 ÷ 8.

4. 489 × 46. **5.** 748 × 79. **6.** 1,608,012 ÷ 9.

7. From 19 bu. 3 pk. subtract 7 bu. 1 pk. 4 qt.

8. Find 3 sevenths of 16 gallons 2 quarts 1 pint.

9. Add 7463, 6857, 6475, 8568, 2945, 9756, and 5738.

10. Find the cost of three hundred fifty-six barrels of potatoes at $3.65 a barrel.

11. If 1 ninth of a piece of land is worth $765, how much is half the rest worth at the same price?

12. A boy sold 6 bushels and 2 pecks of nuts at 15 cents a quart. How much did he get for them?

13. A farmer raised 856 bushels of potatoes and sold 478 bushels. If he sells the remainder at sixty-five cents a bushel, how much will he receive for them?

LESSON 53

1. 9,000,392 – 1,420,784. **2.** 9,405,361 – 6,395,655.

3. 8,805,364 – 3,040,968. **4.** 6,599,100 – 1,749,168.

5. Add $74, $487.65, $.95, $72.68, $258, and $73.84.

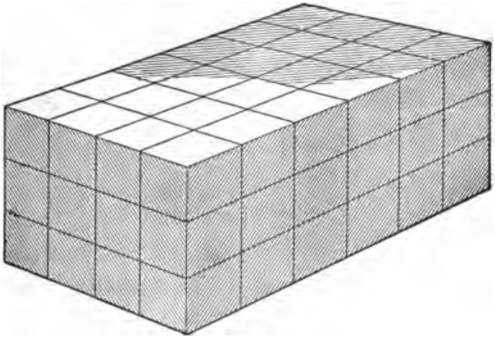
6. A man earns $2850 in a year and spends $975. How much does he save?

7. A man bought seven acres of land, paying $1862 for it. Find the cost per acre.

8. At eight cents a quart, how much will a farmer receive for 486 quarts of berries?

9. A lady spent $9.75, which was 1 seventh of her money. How much did she have left?

10. If $46.35 is 1 seventh of a man's money, how much can he spend and have $\frac{2}{7}$ of his money left?



1. How many cubes are there in each row? How many rows are there in each layer? How many layers?

How many cubic inches in each row, how many rows in each layer, how many layers, in these solids?

2. 4 in. by 3 in. by 2 in. **3.** 1 ft. by 8 in. by 6 in.

4. 9 in. by 5 in. by 4 in. **5.** 2 ft. by 9 in. by 8 in.

6.

48	35	75	24	21	27	35	17	12	12
×2	3	2	4	3	2	4	4	5	7

7. A sidewalk contains 600 square feet. If it is 5 feet wide, how long is it?

8. Compare: $\frac{1}{3}$ with $\frac{5}{9}$ $\frac{4}{9}$ with $\frac{2}{3}$ $\frac{1}{3}$ with $\frac{1}{6}$

9. At six cents a pint, how much will five quarts and a pint of berries cost?

10. $\frac{1}{2}$ of 78 is $2\frac{3}{4} = \frac{?}{4}$ $\frac{15}{2} = ?$ $\frac{1}{2}$ of 80 is

11. How many square inches are there in a piece of paper 2 feet long and 5 inches wide?

12. If I give 3 fourths of an orange to each of 16 children, how many oranges must I cut?

13. If I divide an oblong 15 inches long and 3 inches wide into half-inch squares, how many will there be?

LESSON 54

1. Find $\frac{4}{5}$ of 945. **2.** $856 \times 8\frac{1}{2}$. **3.** $425{,}346 \div 6$.

4. Find $\frac{5}{6}$ of 876. **5.** $960 \times 6\frac{2}{3}$. **6.** $384{,}972 \div 7$.

7. A room is eighteen feet square. How many square feet are there in the ceiling?

8. How many square feet are there in a floor eighteen feet long and $14\frac{1}{2}$ feet wide?

9. There are 966 pupils in a school, 4 sevenths of whom are girls. How many boys are there?

10. How many square inches are there in a piece of paper 38 inches long and nine inches wide?

11. A man sold 1 fourth of a piece of land for $675. At the same price, what is the remainder worth?

12. How many square inches are there in a piece of paper eighteen feet long and eight inches wide?

LESSON 55

1. 3,405,981 – 2,419,083. **2.** 5,238,172 – 4,887,605.

3. 8,301,007 – 1,770,539. **4.** 9,233,712 – 2,435,626.

5. Find the cost of 208 sheep at $3.75 a head.

6. How many acres of land, at $5 an acre, cost $4725?

7. Add 4635, 8492, 9657, 7465, 7362, 3748, and 4756.

8. Add 9 yd. 2 ft. 7 in., 8 yd. 5 in., 7 yd. 2 ft., 1 ft. 9 in., and 5 yd. 1 ft. 4 in.

9. What is the area of a piece of ground 145 feet long and forty-three feet wide?

10. A lady bought a dress for $45, which was 2 fifths of her money. How much had she left?

11. A dealer bought fruit for $272 and sold it at a loss of $84.65. How much did he receive for it?

$5\frac{1}{2}$ yards make 1 rod. **$16\frac{1}{2}$ feet make 1 rod.**

The *perimeter* of any figure is the distance around it, or the sum of its sides. In expressing measurements, feet are often expressed by one accent and inches by two accents, as follows: 8 ft. 8′ 9 in. 9″.

1.	78	65	28	47	78	67	56	75	66	87
	+9	38	36	53	85	87	74	48	78	68

How many cubic inches in each row, how many rows in each layer, how many layers, in these solids?

2. 7″ × 5″ × 4″. 3. 1 yd. by 1 ft. by 9 in.

4. 9″ × 7″ × 5″. 5. 2 yd. by 2 ft. by 1 ft.

6. A man sold milk at five cents a quart for $33. How many quarts did he sell?

7. $\frac{1}{4}+\frac{7}{8}$ $\frac{3}{4}-\frac{1}{8}$ $\frac{1}{2}+\frac{3}{4}$ $\frac{7}{8}-\frac{3}{4}$

8. How long will 9 bushels 3 pecks of potatoes last a family, if they eat a peck a week?

9. 5 pk. 4 qt. are — qt. 9 bu. 3 pk. are — pk.

10. If a man pays $55 for 11 yards of cloth, how much must he pay for 3 fourths of a yard?

11. 3 ft. 4 in. are — in. 8 yd. 2 ft. are — ft.

12. A boy picked berries at 2 cents a quart, earning $6.40. How many quarts did he pick?

13. 8 qt. 1 pt. are — pt. 4 gal. 3 qt. are — qt.

14. In a rectangle 3 ft. by 14 in., how many square inches in each row? How many rows are there?

REDUCTION DESCENDING

Reduce 8 bu. 3 pk. 6 qt. to quarts.

$$\begin{array}{r} 4 \text{ pk.} \\ \underline{8} \\ 35 \text{ pk.} \end{array} \qquad \begin{array}{r} 8 \text{ qt.} \\ \underline{35} \\ 286 \text{ qt.} \end{array}$$

In 1 bu. there are 4 pk.; in 8 bu. 3 pk. there are 35 pk. In 1 pk. there are 8 qt.; in 35 pk. 6 qt. there are 286 qt.

LESSON 56

1. 869 × 58. **2.** \$8.74 × 6½. **3.** 683,060 ÷ 7.

4. 796 × 64. **5.** \$7.74 × 8⅓. **6.** 570,000 ÷ 8.

7. Find ⅜ of 37 yd. 1 ft. **8.** Find ⅚ of 27 gallons.

9. Reduce 8 rods 9 feet 7 inches to inches.

10. Reduce 9 gallons 3 quarts 1 pint to pints.

11. Reduce 7 bushels 2 pecks 5 quarts to quarts.

12. Reduce 7 sq. yd. 5 sq. ft. 74 sq. in. to sq. in.

13. How many square feet are there in a floor six yards long and 14 feet wide?

14. A man paid \$7800 for a store and \$1400 less for a house. How much did he pay for both?

15. A has 1110 acres of land, which is 6 times as many acres as B has. How many acres have both?

LESSON 57

1. 4,244,006 – 3,269,209. **2.** 6,641,000 – 5,680,648.

3. 9,155,963 – 8,707,187. **4.** 9,109,192 – 6,344,539.

5. Reduce 9 bushels 1 peck 4 quarts to quarts.

6. Reduce 6 rods 4 yards 2 feet 5 inches to inches.

7. At 28 cents a pound, what cost 6500 pounds of wool?

8. From 22 gal. 2 qt. 3 gi. subtract 9 gal. 1 qt. 1 pt.

9. How many square inches are there in a board eight feet long and 9 inches wide?

10. A man paid \$350 for a carriage and \$115 less for a horse. How much did he pay for both?

11. Add nine million nine thousand ninety, seventy million eight hundred four thousand six hundred, 586,352, and seven hundred six thousand four hundred ninety.

1. 2 rods are — yards. 2 rods are — feet.

2. At $1.75 a barrel, how much will four barrels of potatoes cost?

3. At 48 cents a dozen, how much do 80 oranges cost?

4. At 5 cents a quart, how many quarts of milk must a milkman sell to receive $16?

5. What is the perimeter of a rectangle 4 in. by 2 in.?

6. If 35 pounds of sugar cost two dollars, how much would I have to pay for 7 pounds?

7. Compare a 2-inch square with an oblong 6″ by 2″.

8. How many times can a cup holding $\frac{2}{3}$ of a pint be filled from a jar containing 4 pints?

9. $\frac{1}{2} + \frac{1}{3}$ $\frac{2}{3} - \frac{5}{9}$ $\frac{1}{2} + \frac{1}{6}$ $\frac{1}{2} - \frac{1}{3}$

10. What can you make by uniting two oblongs, one 5 in. by 3 in. and the other 5 in. by 2 in.?

11. $\frac{2}{3}$ of 27 is $8\frac{1}{2} = \frac{?}{2}$ $\frac{13}{3} = ?$ $\frac{2}{3}$ of 30 is

12. If a man receives $1.20 for $\frac{3}{4}$ of a day's work, how much will he receive, if he works 10 days?

13. Compare: $\frac{1}{6}$ with $\frac{2}{3}$ $\frac{1}{2}$ with $\frac{1}{6}$ $\frac{5}{9}$ with $\frac{2}{3}$

14. What two forms can you make by uniting two oblongs, each 6 inches long and 3 inches wide?

15. 15 is $\frac{1}{4}$ of   17 is $\frac{1}{4}$ of   15 is $\frac{1}{5}$ of   17 is $\frac{1}{5}$ of

16. In a rectangle 1 yd. by 1 ft., how many half-inch squares are there in each row? How many rows?

17. 5000 pounds are — tons. 7000 pounds are — tons.

18. If 3 men can do a piece of work in 10 days, in how many days can 5 men do it? 15 men? 6 men? 2 men?

19. In a rectangular solid 10 in. by 6 in. by 3 in., how many cubic inches are in each row? How many rows are there in each layer? How many layers are there?

LESSON 58

1. 7638 × 56. **2.** 975 × $8\frac{1}{5}$. **3.** 599,360 ÷ 8.

4. 4837 × 74. **5.** 684 × $7\frac{1}{4}$. **6.** 507,213 ÷ 9.

X ✓ **7.** Reduce 7 gal. 3 qt. 1 pt. 3 gi. to gills.

8. Add $68, $6.42, $25.28, $.75, $74.86, and $67.52.

9. Add 2637, 3748, 4859, 6273, 7384, 4957, and 7546.

10. A man sold land for $1875, which is $268.75 more than he paid for it. Find the cost.

11. How many square yards are there in a lawn 36 yards long and 26 yards 1 foot wide?

12. A man sold flour at $4 a barrel, receiving $3148 for it. How many barrels did he sell?

13. I paid $\frac{3}{5}$ of $625 for a span of horses and the remainder for a carriage. Find the cost of each.

LESSON 59

1. 8,174,291 – 7,804,508. **2.** 3,167,735 – 2,786,750.

3. 5,110,003 – 4,251,358. **4.** 8,131,985 – 5,036,289.

5. At seven cents a pound, how many pounds of sugar cost $66.15?

6. Add 17 bu. 2 pk. 6 qt., 19 bu. 3 pk. 7 qt., 14 bu. 3 qt., and 13 bu. 1 pk.

7. How many square yards are there in a piece of ground 54 feet long and 48 feet wide?

8. A man sold 3456 quarts of berries at 9 cents a quart. How much did he get for them?

9. A lady paid $6.85 for a hat and twice as much for a dress. How much did she pay for both?

10. At $1.35 a rod, how much will it cost to enclose a rectangular field 38 rods long and 24 rods wide?

1.

40	40	40	40	40	12	12	12	19	29
×5	6	7	8	9	6	8	9	2	2

2. What is the perimeter of a rectangle one foot long and 8 inches wide?

3. How many 6-cent loaves of bread cost $9?

4. A boy picked 675 quarts of berries at a cent a quart. How much did he earn?

5. $\frac{1}{3}+\frac{4}{9}$ $\frac{2}{3}-\frac{5}{9}$ $\frac{1}{3}+\frac{8}{9}$ $\frac{8}{9}-\frac{2}{3}$

6. At 65 cents a bushel, how much will a grocer receive for 10 bushels of potatoes?

7. $\frac{1}{2}$ of 82 is $3\frac{1}{4}=\frac{?}{4}$ $\frac{14}{3}=?$ $\frac{1}{2}$ of 84 is

8. When 10 dozen eggs cost $2.80, how much must I pay for 3 fourths of a dozen?

9. At 3 cents a yard, what costs 804 feet of wire?

10. If a family eat a peck of potatoes a week, how many bushels will last them 48 weeks?

11. 2 rods are — feet. Six rods are — feet.

12. A man sold 3 fourths of his farm and had 35 acres left. How many acres did he sell?

13. 20 is $\frac{1}{3}$ of 22 is $\frac{1}{3}$ of 24 is $\frac{1}{3}$ of 26 is $\frac{1}{3}$ of

14. In a block of wood 5 ft. long and 6 in. square at the ends, how many cubic inches in each layer?

15. $\frac{4}{5}$ of 2 is $\frac{4}{5}$ of 3 is $\frac{3}{5}$ of 4 is $\frac{4}{5}$ of 4 is

16. In a block of wood 20 inches long and 8 inches wide, how many cubic inches in each layer?

17. In a rectangle 5 ft. by 2 ft., how many 2-inch squares in each row? How many rows are there?

18. Ned paid 75 cents for 2 dozen oranges. At the same price, how much would I have to pay for 8 oranges?

LESSON 60

1. 937 × 480. **2.** 950 × 80. **3.** 3,574,128 ÷ 6.

4. 580 × 650. **5.** 900 × 60. **6.** 4,854,003 ÷ 7.

7. What number is $\frac{5}{8}$ of 3800? **8.** 7,654,104 ÷ 8.

9. Reduce 7 gallons 2 quarts 1 pint 3 gills to gills.

10. At nine cents a quart, how many quarts of cherries can be bought for $14.94?

11. A man bought a house for $4500 and sold it for $6250. How much did he gain or lose?

12. How many squares one inch on each side can be cut from a piece of paper 2 feet long and 8 inches wide?

13. Add seventy thousand ninety, eight million forty-nine thousand three hundred, 497,658, and nine hundred twenty-eight thousand seven hundred eighty-six.

LESSON 61

1. 957 × 486. **2.** 467 × 470. **3.** $\frac{7}{9}$ of 873.

4. 879 × 657. **5.** 390 × 600. **6.** $\frac{5}{7}$ of 686.

7. From 23 yd. 2 ft. subtract 7 yd. 2 ft. 8 in.

8. How many square yards are there in a lawn twenty-five yards square?

9. Find the cost of three and one-half pounds of tea at six cents an ounce.

10. There are 602 pupils in a school, $\frac{4}{7}$ of whom are girls. How many boys are there?

11. A man sold two hundred fifty-six sheep at $4.75 a head. How much did he receive for them?

12. After a merchant had sold 16 yd. 1 ft. from a piece of ribbon, there remained 9 yd. 2 ft. How many yards were there in the piece at first?

1. How much farther is it around a 2-inch square than around a square inch?

2. When does 1 third mean 9 inches? 2 yards?

3. How much would you have to pay for a half-peck of nuts at $1.20 a bushel?

4. At 6 for 5 cents, how many marbles cost 45 cents?

5. A merchant sold ribbon at 8 cents a yard for $12. How many yards did he sell?

6. Compare a 3-inch square with a rectangle 12″ by 3″.

7. A man sold 7 ninths of his wheat and had 50 bushels left. How much did he sell?

8. 13 pt. are — qt. — pt. 17 qt. are — gal. — qt.

9. A farmer sold 25 sheep, which was 1 ninth of all he had. How many did he have left?

10. 28 qt. are — pk. — qt. 27 pk. are — bu. — pk.

11. How many square inches are there in a rectangle one yard long and ten inches wide?

12. 40 in. are — ft. — in. 20 ft. are — yd. — ft.

13. How many rods of fence will it take to enclose a field 12 rods long and 8 rods wide?

14. 27 pt. are — qt. — pt. 31 qt. are — gal. — qt.

15. What two forms can you make by uniting two rectangles, each 4 inches long and 2 inches wide?

REDUCTION ASCENDING

Reduce 437 quarts to pecks and bushels.

$$\begin{array}{r|l} 8 & 437 \\ \hline 4 & 54 - 5\text{ qt.} \\ \hline & 13 - 2\text{ pk.} \end{array}$$

In 1 pk. there are 8 qt.; in 437 qt. there are 54 pk. 5 qt. In 1 bu. there are 4 pk.; in 54 pk. there are 13 bu. 2 pk.

Ans. 13 bu. 2 pk. 5 qt.

LESSON 62

1. Find $\frac{4}{5}$ of 42½ pounds. **2.** 275,358 ÷ 6.

3. Reduce 6 rods 14 feet to inches. **4.** 304,920 ÷ 7.

5. How many rods are there in sixteen miles?

6. Reduce 799 dry quarts to higher denominations.

7. Reduce 225 liquid pints to higher denominations.

8. How many square yards are there in 1674 sq. ft.?

9. Find the cost of 8 rods of wire at two cents a foot.

10. A grocer sold soap at 8 cents a cake, receiving $22 for it. How many cakes did he sell?

11. How many inch squares are there in a piece of paper 6 yards long and 2 feet 8 inches wide?

12. Sold 1 seventh of a piece of land for $4650. At the same price, how much is half the remainder worth?

LESSON 63

1. What number is $\frac{7}{9}$ of 5562? **2.** 291,340 ÷ 7.

3. How many square inches are there in 36 sq. ft.?

4. Change 391 liquid pints to higher denominations.

5. A grocer bought 5360 pounds of sugar at 6 cents a pound. Find the cost.

6. Add 18 gal. 2 qt. 1 pt. 2 gi., 17 gal. 1 pt., 15 gal. 3 qt. 2 gi., and 16 gal. 3 qt. 1 pt.

7. At 95 cents a rod, how much will it cost to enclose a square field 17 rods on each side?

8. A man bought 6 acres of land for $570. At the same price, how much would a farm of 85 acres cost?

9. Add forty thousand eighty-six, ninety thousand eight hundred ninety-three, 472,395, ten thousand seven hundred eighty-four, and six thousand two hundred nine.

1. A rectangular lawn containing 120 sq. rd. is 8 rods wide. How long is it?

2. How large a rectangular field is 75 square rods?

3. A lady gave each of 36 children 1 sixth of a pie. How many pies did she cut?

4. Compare an oblong 8″ by 2″ with a 2-inch square.

5. A grocer sold sugar at 6 cents a pound for $24.48. How many pounds did he sell?

6. $\frac{1}{3}+\frac{1}{6}$ $\frac{1}{2}-\frac{1}{3}$ $\frac{5}{6}-\frac{2}{3}$ $\frac{1}{3}-\frac{1}{6}$

7. At 2 cents a pound, what is the value of 2 bags of meal, 100 pounds in each bag?

8. Compare: $\frac{1}{2}$ with $\frac{7}{8}$ $\frac{1}{2}$ with $\frac{1}{4}$ $\frac{3}{8}$ with $\frac{1}{2}$

9. If a horse eats a peck of oats a day, how many bushels will last him eight weeks?

10. $\frac{1}{2}$ of 86 is $9\frac{1}{2}=\frac{?}{2}$ $\frac{16}{3}=?$ $\frac{1}{2}$ of 88 is

11. A farmer sold 5 eighths of his potatoes and had 90 bushels left. How many did he sell?

12. 85 × 10 $4.60 × 10 $.76 × 10 $38 × 10

13. How many square yards are there in a piece of paper 30 yards long and six feet wide?

14. $\frac{1}{2}+\frac{3}{8}$ $\frac{1}{2}-\frac{1}{4}$ $\frac{1}{4}+\frac{5}{8}$ $\frac{1}{4}-\frac{1}{8}$

15. How many half-inch squares are there in a rectangle 25 inches long and 5 inches wide?

16. Compare: $\frac{1}{8}$ with $\frac{1}{4}$ $\frac{3}{4}$ with $\frac{1}{8}$ $\frac{1}{8}$ with $\frac{1}{2}$

17. If a field containing 40 acres is divided into fifths. how many acres are there in each part?

18. 29 is $\frac{1}{2}$ of 31 is $\frac{1}{2}$ of 27 is $\frac{1}{3}$ of 28 is $\frac{1}{3}$ of

19. How many cubic inches are there in a block of wood 10 inches long, 6 inches wide, and 5 inches thick?

LESSON 64

1. 786 × 649.
2. 608 × 490.
3. $\frac{4}{7}$ of 6853.
4. 968 × 857.
5. 759 × 800.
6. $\frac{4}{5}$ of 4785.
7. Reduce seventeen acres to square rods.
8. How many pecks are there in 1322 quarts?
9. Add 4732, 6375, 4936, 8749, 7576, 3748, and 9867.
10. A man paid $37.20 for eight tons of coal. How much did it cost per ton?
11. A boy earned $7.60 and spent $\frac{3}{8}$ of it for a pair of shoes. How much had he left?
12. A man earned $52. He paid $18 for clothes and $3.85 for shoes. How much did he have left?
13. How many square inches are there in a piece of paper four yards long and seven inches wide?

LESSON 65

1. Multiply 7080 by 608.
2. 623 × 700.
3. Reduce 7 yd. 2 ft. 9 in. to inches.
4. 587 × 964.
5. Reduce 567 gills to higher denominations.
6. From 32 bu. 6 qt. subtract 14 bu. 2 pk. 7 qt.
7. Find two-sevenths of 23 sq. yd. 1 sq. ft. 15 sq. in.
8. Add 8679, 5243, 8743, 5568, 6938, 4748, and 6749.
9. A lady paid 1 fifth of her money for a dress that cost $16.85. How much did she have left?
10. A man bought a horse for $475 and sold it at a profit of $375. How much did he get for the horse?
11. If a man sells his peaches at the rate of 8 baskets for $7.60, how much does he receive for 275 baskets?
12. How many square feet of boards will it take to build a tight board fence 124 feet long and $5\frac{1}{2}$ feet high?

1. At 25 cents a peck, how many bushels of potatoes can be bought for $46?

2. Compare: $\frac{1}{3}$ with $\frac{7}{9}$ $\frac{2}{9}$ with $\frac{2}{3}$ $\frac{2}{9}$ with $\frac{1}{3}$

3. If a conductor collects $15.60 in 5-cent fares, how many people ride on his car?

4. 16 yards are — feet. 90 feet are — yards.

5. If 1 eighth of a yard of silk costs 40 cents, how much is half a yard worth?

6. Compare: $\frac{1}{3}$ with $\frac{5}{6}$ $\frac{1}{3}$ with $\frac{8}{9}$ $\frac{2}{3}$ with $\frac{5}{6}$

7. A farmer sold 6 sevenths of his sheep and had 25 left. How many did he sell?

8. How many 2-inch squares are there in a sheet of paper 5 feet long and 16 inches wide?

EXERCISES IN ADDITION

8	8	5	3	7	8	8	7	8	5	8	8
1	7	4	8	2	8	6	3	3	4	8	7
7	8	5	7	8	7	3	5	4	6	6	6
4	3	6	5	1	6	6	6	9	6	4	2
5	9	6	8	9	3	3	8	6	6	8	7
6	6	2	4	2	4	6	1	9	6	7	4
8	7	5	8	9	6	7	4	6	5	7	5
7	9	6	4	4	8	4	7	9	6	3	4
4	8	4	7	5	7	5	5	8	8	5	8
8	7	5	9	6	8	7	4	5	2	4	4
6	8	7	5	9	6	8	7	7	6	7	8
8	4	4	4	3	6	4	4	4	6	6	2
4	4	7	9	9	4	5	7	7	5	7	4
4	8	5	6	2	7	8	4	8	7	8	8
a	*b*	*c*	*d*	*e*	*f*	*g*	*h*	*i*	*j*	*k*	*l*

LESSON 66

1. 584 × 936. **2.** 743 × 80. **3.** 3,954,216 ÷ 7.

4. What number is $\frac{5}{7}$ of 4256? **5.** 5,950,480 ÷ 8.

6. How many yards are there in 260 feet?

7. Add $7, $6.47, $.86, $8.64, $8, $9.86, and $.94.

8. How many square yards are there in a ceiling that is 27 feet long and 20 feet wide?

9. A farmer sold 8 ninths of his potatoes and had 56 bushels left. How many did he sell?

10. If $68.85 is $\frac{1}{7}$ of a man's money, how much can he spend and have 3 sevenths of his money left?

11. Add forty million six thousand seven hundred six, seven million ninety thousand eighty, 859,746, six hundred twelve thousand one hundred ninety-one, and 973,287.

LESSON 67

1. Multiply 487 by 200. **2.** Divide 654,320 by 8.

3. Multiply 3084 by 903. **4.** Divide 521,370 by 9.

5. How many feet are there in forty-six rods?

6. How many square yards are there in 702 square feet?

7. Add 9 yd. 2 ft. 8 in., 7 yd. 4 in., 5 yd. 2 ft., 6 yd. 1 ft. 8 in., and 4 yd. 2 ft. 4 in.

8. How many 2-inch squares can be cut from a piece of tin 3 feet long and 14 inches wide?

9. A man has 46 bu. 1 pk. of wheat in one bin and 56 bu. 3 pk. in another. How much has he in both?

10. A merchant bought 585 barrels of flour and sold $\frac{7}{9}$ of it at $5 a barrel. How much did he get for it?

11. A father divided a sum of money among his six children, giving each one $275. Find the sum divided.

1. Nine bushels of potatoes cost $7.65. What was the price per bushel?

2. Compare a 3-inch square with a rectangle 15″ by 3″.

3. A rectangle contains 75 square inches. If it is 5 inches wide, how long is it?

4. What is the perimeter of a rectangle 5 ft. by 3 ft.?

5. A has 145 sheep, and B has nine times as many. How many sheep have both?

6. $\frac{1}{3}+\frac{5}{9}$ $\frac{5}{9}-\frac{1}{3}$ $\frac{1}{3}-\frac{2}{9}$ $\frac{2}{3}-\frac{4}{9}$

7. If a milkman sells milk at 5 cents a quart, for how many quarts will he get $28?

8. Compare: $\frac{1}{8}$ with $\frac{3}{4}$ $\frac{1}{4}$ with $\frac{3}{8}$ $\frac{5}{8}$ with $\frac{3}{4}$

9. If a horse eats 8 quarts of oats a day, how many bushels will last him 6 weeks?

10. 10 is $\frac{2}{5}$ of 12 is $\frac{2}{5}$ of 14 is $\frac{2}{5}$ of 16 is $\frac{2}{5}$ of

11. If I cut a dozen oranges into quarters, to how many children can I give 3 pieces each?

12. Compare: $\frac{3}{8}$ with $\frac{3}{4}$ $\frac{1}{4}$ with $\frac{1}{8}$. $\frac{1}{4}$ with $\frac{5}{8}$

13. A man sold 1 ninth of a piece of land. Compare the part sold with half the part left.

14. If 1 fourth of a yard of ribbon is worth 8 cents, how much must I pay for $2\frac{1}{2}$ yards?

15. What can you make by uniting two oblongs, one 8 in. by 3 in. and the other 2 in. by 8 in.?

16. How many inch cubes can be put into a box 10 inches long, 6 inches wide, and 3 inches deep?

17. At $1 a rod, how much will it cost to fence a rectangular field 15 rods long and 10 rods wide?

18. If 8 men can do a piece of work in $2\frac{1}{2}$ days, how many men can do it in 5 days? In 2 days? In 1 day?

7

LESSON 68

1. Multiply 977 by 600. **2.** Divide 4,735,800 by 6.

3. Find $\frac{5}{6}$ of 24 gal. 3 qt. **4.** Divide 3,260,810 by 7.

5. Multiply 46,504 by 123. **6.** Divide 4,321,504 by 8.

7. Reduce 2422 dry quarts to higher denominations.

8. How many inches are there in 12 rd. 4 yd. 1 ft.?

9. At eight cents a quart, how many quarts of berries can be bought for $70?

10. A man gave his son $4250 and his daughter $1475 less. How much did he give to both?

11. A house cost $5775, which is seven times as much as the lot cost. How much did both cost?

12. What is the difference in the area of two gardens, one 42 yards square and the other containing 874 sq. yd.?

LESSON 69

1. 459×873. **2.** $\frac{3}{8}$ of 6008. **3.** $5{,}921{,}895 \div 7$.

4. Reduce nine and one-half pounds to ounces.

5. What will thirty-four cows cost at $45 apiece?

6. From 34 gal. 1 pt. 2 gi. subtract 17 gal. 2 qt. 3 gi.

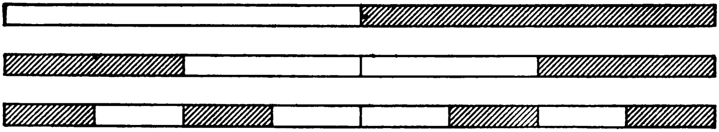
7. Add 7628, 9547, 8473, 6273, 4738, 9678, and 7486.

8. A man bought a house for $3750, which was 3 fifths of his money. How much did he have left?

9. How many square feet of plastering are there in the ceiling of a room 38 ft. long and 23 ft. wide?

10. A man sold 775 bushels of wheat and had 468 bushels left. Find the value of his crop at $.85 a bushel.

11. Add forty-five thousand seventy, seven million ninety-four thousand eight hundred ninety-four, 534,698, and twenty-five million eight thousand eighty-seven.



1.	20	20	20	30	30	30	32	38	31	36
	×7	8	9	7	8	9	2	2	2	2

2. How much will five feet of gold wire cost at two cents an inch?

3. What is the perimeter of a 4-inch square?

4. If potatoes are worth 30 cents a peck, how much will $2\frac{1}{2}$ bushels cost?

5. How many 8-cent balls can be bought for $6?

6. If you take 3 pecks of potatoes out of a bushel, what part of a bushel is left?

7. Compare a rectangle 10″ by 2″ with a 2-inch square.

8. If 24 pounds of crackers cost $1.60, how much would you have to pay for 6 pounds?

9. $\frac{1}{4}+\frac{7}{8}$ $\frac{3}{4}-\frac{1}{8}$ $\frac{1}{2}+\frac{3}{4}$ $\frac{7}{8}+\frac{3}{4}$

10. A grocer paid $24.50 for tea at half a dollar a pound. How many pounds did he buy?

11. $\frac{1}{2}$ of 90 is $4\frac{1}{3}=\frac{?}{3}$ $\frac{17}{2}=?$ $\frac{1}{2}$ of 92 is

12. A girl spent 36 cents for ribbon and had $\frac{4}{7}$ of her money left. How much did she have left?

13. 21 is $\frac{1}{3}$ of 23 is $\frac{1}{3}$ of 25 is $\frac{1}{3}$ of 29 is $\frac{1}{3}$ of

14. A sheet of paper contains 140 half-inch squares. If there are 7 rows, what are the dimensions of it?

15. $\frac{1}{2}+\frac{5}{8}$ $\frac{7}{8}-\frac{1}{2}$ $\frac{1}{2}+\frac{7}{8}$ $\frac{5}{8}-\frac{1}{2}$

16. In a rectangular solid 14′ by 6′ by 4′, how many cubic feet in each row? How many rows in each layer?

LESSON 70

1. 816 × 200. **2.** 6374 × 375. **3.** 215,944 ÷ 4.

4. 790 × 460. **5.** 453,215 ÷ 7. **6.** 774,657 ÷ 9.

7. How many square yards are there in 2574 sq. ft.?

8. Add $9.84, $47.08, $.65, $8.78, $65, and $45.35.

9. A grocer bought flour at $6 a barrel, paying $3924 for it. How much did he buy?

10. By selling a piece of land for $8650, a man gained $1275. How much did he pay for it?

11. A lady paid $5.75 for a pair of shoes and four times as much for a cloak. Find the cost of both.

12. A blackboard is 18 feet long and 3 feet 4 inches wide. How many square feet does it contain?

13. A man sold 1 ninth of his wheat for $465. At the same price, how much is half the remainder worth?

✓ LESSON 71 ✓

1. Find $\frac{5}{6}$ of 27 yards. **2.** Multiply 4730 by 600.

3. Multiply 746 by 378. **4.** Multiply 5800 by 560.

5. Divide 6,275,000 by 8. **6.** Multiply 6900 by 700.

7. Reduce 371 dry quarts to higher denominations.

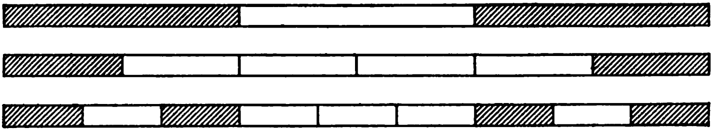
8. How many acres of land, at $9 an acre, cost $5760?

9. Add 24 bu. 3 pk., 25 bu. 2 pk. 5 qt., 21 bu. 1 pk., and 18 bu. 1 pk. 3 qt.

10. A man bought 230 barrels of flour at $4.85 a barrel. How much did he pay for it?

11. The ceiling of a room is 19 feet long and 4 yards wide. How many square feet are there in it?

12. A man sold 1 seventh of a piece of land for $865. At the same price, how much is half the remainder worth?



1. Compare a 2-inch square with a rectangle 1′ by 2″.

2. At the rate of 3 oranges for 25 cents, how much would I have to pay for 27?

3. 32 is $\frac{1}{2}$ of $4\frac{2}{3} = \frac{?}{3}$ $\frac{12}{2} = ?$ 33 is $\frac{1}{2}$ of

4. At 1 third of a cent apiece, how many dozen marbles can you buy for 24 cents?

5. 16 is $\frac{1}{4}$ of 18 is $\frac{1}{4}$ of 19 is $\frac{1}{4}$ of 20 is $\frac{1}{4}$ of

6. How long will $9\frac{1}{2}$ bushels of potatoes last a family, if they eat a peck a week?

7. $\frac{1}{2} + \frac{1}{3}$ $\frac{7}{8} - \frac{1}{2}$ $\frac{1}{2} + \frac{3}{4}$ $\frac{7}{8} - \frac{3}{4}$

8. If a conductor collects $20.25 in 5-cent fares, how many people ride on his car?

9. 78 × 100 $58 × 100 $6.35 × 100 $.95 × 100

10. If 28 pounds of sugar cost $1.60, how much would I have to pay for seven pounds?

11. Compare: 9 in. with a yard. 6 in. with a yard.

12. How many oranges will it take to give a third of an orange to each of 51 children?

13. $\frac{3}{5}$ of 15 is $\frac{4}{5}$ of 20 is $\frac{2}{5}$ of 25 is $\frac{3}{5}$ of 30 is

14. What can you make by uniting two oblongs, one 7 in. by 4 in. and the other 3 in. by 7 in.?

15. 16 is $\frac{1}{5}$ of 18 is $\frac{1}{5}$ of 20 is $\frac{1}{5}$ of 25 is $\frac{1}{5}$ of

16. How many cubic feet of air are there in a room 12 feet long, 10 feet wide, and 8 feet high?

17. If 4 men can do a piece of work in 6 days, in how many days can 3 men do it? 12 men? 1 man? 8 men?

LESSON 72

1. 3,794,715 ÷ 5. **2.** 759 × 684. **3.** 750 × 480.
4. 3,942,589 ÷ 7. **5.** 489 × 387. **6.** 879 × 606.

7. How many gallons are there in 1943 quarts?

8. How many sheets of paper are there in 124 quires?

9. How many square yards are there in a lawn 180 feet long and 135 feet wide?

10. A grocer bought 75 gal. 3 qt. of oil and sold 28 gal. 2 qt. 1 pt. How much had he left?

11. A man bought sugar at seven cents a pound, paying $18.55 for it. How many pounds did he buy?

12. Add eight hundred thousand seven hundred eight, 98,462, four million seventy-five thousand sixty, 276,583, and ninety-three thousand seven hundred sixty-seven.

LESSON 73

1. $84.67 is $57 less than what sum? **2.** 478 × 569.

3. Reduce 18 bu. 2 pk. 7 qt. to quarts. **4.** 968 × 748.

5. From 41 yd. 2 ft. subtract 16 yd. 2 ft. 4 in.

6. Add 2637, 6273, 3748, 7384, 4859, 9562, and 7265.

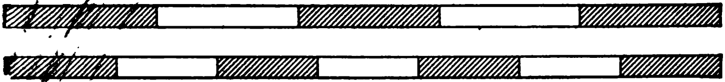
7. A boy spent $4.65, which was 3 fifths of his money. How much did he have left?

8. How much will eight hundred seventy-five pounds of beef cost at nine cents a pound?

9. If a man's salary is $1800 and he spends 5 eighths of it, how much does he save in 3 years?

10. A man sold 1 seventh of his berries at 8 cents a quart for $22. How many quarts did he raise?

11. How many half-inch squares are there in a sheet of paper fourteen inches long and eight inches wide?



1.	65	48	27	42	67	92	86	69	96	89
	+9	75	38	37	85	49	78	79	59	57

2. Compare an oblong 1′ by 6″ with a 3-inch square.

3. I paid $18.50 for milk at five cents a quart. How many quarts did I buy?

4. Compare: 2 ft. with 2 yards. 8 in. with 2 feet.

5. If four pencils cost 24 cents, how many pencils can be bought for 90 cents?

6. $\frac{1}{2}+\frac{1}{3}$ $\frac{2}{3}-\frac{1}{2}$ $\frac{1}{2}+\frac{1}{6}$ $\frac{1}{2}-\frac{1}{3}$

7. How much farther is it around a 5-inch square than around a 2-inch square?

8. $\frac{2}{9}$ of 18 is $5\frac{1}{3}=\frac{?}{3}$ $\frac{18}{4}=?$ $\frac{2}{9}$ of 27 is

9. If 5 sixths of a piece of land is worth $75, how much is half of the piece worth?

10. 11 is $\frac{1}{6}$ of 12 is $\frac{1}{6}$ of 15 is $\frac{1}{6}$ of 10 is $\frac{5}{6}$ of

11. If peaches are selling at the rate of 8 for 25 cents, how much must I pay for 2 dozen?

12. 18 is $\frac{2}{3}$ of 20 is $\frac{2}{3}$ of 22 is $\frac{2}{3}$ of 24 is $\frac{2}{3}$ of

13. In a rectangle 4 ft. by 19 in., how many square inches in each row? How many rows are there?

14. 15 is $\frac{5}{6}$ of 10 is $\frac{2}{9}$ of 10 is $\frac{5}{9}$ of 10 is $\frac{1}{9}$ of

15. How can your mother cut 3 and a half pies into equal pieces to give each of 21 children a piece?

16. Compare: $\frac{1}{5}$ with $\frac{3}{5}$ $\frac{4}{7}$ with $\frac{1}{7}$ $\frac{2}{7}$ with $\frac{6}{7}$

17. In a rectangular piece of stone 4′ by 3′ by 14″, how many cubic inches in each row? How many rows are there in each layer? How many layers are there?

LESSON 74

1. Multiply 648 by 397. **2.** 1,842,855 ÷ 7.

3. Multiply 9478 by 659. **4.** 2,759,800 ÷ 8.

5. Find $\frac{5}{7}$ of 36 bu. 3 pk. 7 qt. **6.** 7,117,443 ÷ 9.

7. Change 627 liquid pints to higher denominations.

8. Add \$58, \$7.49, \$.85, \$47.67, \$8.34, and \$9.78.

9. A merchant bought flour for \$2134 and sold it for \$1928. How much did he lose?

10. If 1 ninth of a man's money is \$48.65, how much can he spend and have $\frac{5}{9}$ of his money left?

11. How many square inches are there in a piece of ribbon nine yards long and two inches wide?

12. At \$2.75 a rod, how much will it cost to build a fence around a garden 10 rods long and 6 rods wide?

LESSON 75

1. 8,527,162 – 5,240,719. **2.** 9,801,834 – 4,561,905.

3. 7,460,214 – 1,162,248. **4.** 8,158,571 – 3,370,095.

5. What cost 475 acres of land at \$85 an acre?

6. How many square inches are there in 46 sq. ft.?

7. How many square yards are there in 783 sq. ft.?

8. Add 28 gal. 2 qt., 27 gal. 1 pt., 25 gal. 3 qt., 32 gal. 1 pt., and 24 gal. 2 qt.

9. How many square inches are there in a sheet of paper 2 feet 8 inches square?

10. A boy spent \$8.64, which was 3 sevenths of his money. How much did he have left?

11. A man has \$765 in one bank and \$456.75 less in another bank. How much has he in both banks?

1.

50	50	50	50	50	33	39	43	41	44
×5	6	7	8	9	2	2	2	2	2

2. At four cents apiece, how many papers must a boy sell to receive $6?

3. Compare a square inch with a 2-inch square.

4. At 20 cents a pint, what will four quarts and a pint of alcohol cost?

5. At 8 for 25 cents, how much do 24 oranges cost?

6. A man sold 1 sixth of his sheep at $3 a head for $75. How many did he keep?

7. Compare an oblong 8″ by 4″ with a 2-inch square.

8. If 1 eighth of a man's wheat is worth $50, how much is 3 fourths of it worth?

9. What is the perimeter of an oblong 6 in. by 4 in.?

10. How many yards of fence will enclose a rectangular garden 50 yards long and 37 yards wide?

11. Compare a 3-inch square with a rectangle 9″ by 6″.

12. A boy spent $\frac{1}{5}$ of his money for a ball and had $1.20 left. How much did the ball cost?

13. 30 is $\frac{1}{3}$ of   30 is $\frac{1}{5}$ of   20 is $\frac{1}{6}$ of   11 is $\frac{1}{7}$ of

14. A man spent 6 sevenths of his money for a watch and had $15 left. Find the cost of the watch.

15. 12 is $\frac{3}{4}$ of   15 is $\frac{3}{4}$ of   18 is $\frac{3}{4}$ of   21 is $\frac{3}{4}$ of

16. In a rectangle 35 in. by 9 in., how many half-inch squares in each row? How many rows are there?

17. A boy sold 5 oranges to each of 9 men and had 1 third as many left. How many did he have at first?

18. How many cubic inches are there in a block of wood 40 inches long, 5 inches wide, and 4 inches thick?

LESSON 76

1. Multiply 432 by 697.
2. Divide 215,396 by 4.
3. Multiply 8675 by 605.
4. Divide 637,000 by 8.
5. Multiply 58,472 by 86.
6. Divide 873,783 by 9.
7. How many feet are there in seventy-eight rods?
8. How many ounces are there in forty-five pounds?
9. A grocer sold 8 barrels of potatoes for $22. What was the price per barrel?
10. A man bought land at $6 an acre for $750 and sold it at $9 an acre. Find his gain.
11. At 2 cents a square foot, how much will 75 boards cost, each 14 ft. long and 1 foot wide?
12. A man sold $\frac{1}{9}$ of a piece of land for $675. At the same price, how much is half the remainder worth?

LESSON 77

1. 8,975,374 – 3,291,816.
2. 8,274,587 – 4,639,628.
3. 4,562,505 – 1,724,409.
4. 9,030,041 – 6,357,563.
5. Find $\frac{3}{5}$ of $71\frac{1}{4}$ pounds.
6. Multiply 465 by 430.
7. From 41 bu. subtract 24 bu. 2 pk. 4 qt.
8. Reduce 2742 dry quarts to higher denominations.
9. A man sold 3 gross of pencils at 3 cents apiece. How much did he get for them?
10. How many square feet are there in a floor 28 feet long and 18 feet 3 inches wide?
11. If 1 eighth of a certain distance is ninety-four miles, what is 3 fourths of the distance?
12. Bought tea for $46.35 and coffee for $9.85. If I sell both for $71.12, how much shall I gain?

1. If a quart of oil costs 3 cents, how many gallons can I buy for $1.20?

2. Compare a 2-inch square with a square inch.

3. How many pies will it take to give 1 sixth of a pie to each of 120 children?

4. Compare a 3-inch square with a rectangle $2'$ by $3''$.

5. If you have $2\frac{1}{3}$ oranges, to how many children can you give 1 sixth of an orange?

6. $\frac{1}{3} + \frac{4}{9}$ $\frac{2}{3} - \frac{5}{9}$ $\frac{1}{3} + \frac{8}{9}$ $\frac{8}{9} - \frac{2}{3}$

7. A man sold cherries at 8 cents a quart for $12. How many quarts did he sell?

8. 34 is $\frac{1}{2}$ of 35 is $\frac{1}{2}$ of 31 is $\frac{1}{3}$ of 32 is $\frac{1}{3}$ of

9. A boy spent $1.25 and had 3 fourths of his money left. How much did he have left?

10. $7.85 × 10 $.65 × 10 $45 × 100 $3.85 × 100

11. How long will 9 bushels 3 pecks of potatoes last a family, if they eat 3 pecks a week?

12. 18 is $\frac{2}{5}$ of 20 is $\frac{2}{5}$ of 22 is $\frac{2}{5}$ of 24 is $\frac{2}{5}$ of

13. How far will a man walk in walking around a square field 40 rods on each side?

14. Compare: 8 in. with a foot. 9 in. with a foot.

15. If a square foot of gold paper is worth 40 cents, how much is a 2-foot square worth?

16. If 8 men can do a piece of work in $3\frac{1}{2}$ days, how many men can do it in 4 days? In 2 days? In 7 days?

17. In a rectangular solid 6 ft. long and 10 in. square at the ends, how many cubic inches in each row? How many rows in each layer? How many layers are there?

LESSON 78

1. Multiply 40,300 by 700.

2. 3,797,405 ÷ 5.

3. What number is $\frac{8}{9}$ of 6885?

4. 4,578,210 ÷ 7.

5. How many rods are there in sixteen miles?

6. Reduce 7 gallons 2 quarts 1 pint 3 gills to gills.

7. What sum must be added to $ 384 to make $ 524.68?

8. A lady spent $ 37, which was 4 ninths of her money. How much did she have left?

9. At what price per pound will seven pounds of tea cost four dollars fifty-five cents?

10. Find the cost of 2 bushels of berries at 8 cents a quart, and 3 bushels of cherries at 9 cents a quart.

11. Add nine million six, 875,943, eight hundred forty-three thousand eighty-four, 96,354, eight thousand seven hundred forty-three, and seventy thousand ninety.

LESSON 79

1. 7,135,246 – 4,205,758.

2. 8,927,044 – 3,980,278.

3. 9,200,594 – 4,743,809.

4. 9,478,262 – 1,698,519.

5. How many quarts are there in 1408 gills?

6. What cost 134 yards of silk at $ 2.75 a yard?

7. Add 8478, 4695, 7364, 4936, 5682, 3465, and 8769.

8. Add 18 yd. 2 ft., 27 yd. 10 in., 24 yd. 1 ft., 25 yd. 2 in., and 19 yd. 2 ft.

9. How many pads, at seven cents apiece, will cost twelve dollars twenty-five cents?

10. A floor is 27 feet long and 19 feet 4 inches wide. How many square yards does it contain?

11. A farmer sold 9 barrels of apples for $ 14.85. At the same price, how much would he receive for 86 barrels?

1. At $2.25 a barrel, how much will a farmer receive for 8 barrels of apples?

2. What is the perimeter of a 5-inch square?

3. If 6 pencils cost 48 cents, how many could I buy at the same price for $1.60?

4. Compare a square inch with a 3-inch square.

5. If you pour 5 quarts of milk into a 2-gallon can, what part of the can is filled?

6. $\frac{1}{3} + \frac{5}{6}$ $\frac{1}{2} - \frac{1}{3}$ $\frac{1}{3} + \frac{8}{9}$ $\frac{2}{3} - \frac{1}{2}$

7. From 3 yards of ribbon a merchant sold half a yard. What part of the piece was left?

8. Compare an oblong 2′ by 4″ with a 4-inch square.

9. How many square yards are there in a floor seven yards long and eighteen feet wide?

10. 36 is $\frac{1}{2}$ of $3\frac{3}{4} = \frac{?}{4}$ $\frac{17}{3} = ?$ 37 is $\frac{1}{2}$ of

11. A lady bought oranges at 4 cents apiece, paying $5 for them. How many did she buy?

12. Compare: 9 in. with a yard. 6 in. with a yard.

13. A boy sold 75 quarts of berries at 8 cents a quart. How much did he receive for them?

14. 33 is $\frac{1}{3}$ of 34 is $\frac{1}{3}$ of 35 is $\frac{1}{3}$ of 36 is $\frac{1}{3}$ of

15. A grocer bought tea at 1 fourth of a dollar a pound for $15. How many pounds did he buy?

16. 2 rods are — feet. 8 rods are — feet.

17. How many square inches are there in a piece of ribbon 5 yards long and 4 inches wide?

18. 12 is $\frac{3}{5}$ of 15 is $\frac{3}{5}$ of 18 is $\frac{3}{5}$ of 21 is $\frac{3}{5}$ of

19. A man sold 6 sevenths of his berries at 10 cents a quart for $42. How many quarts did he keep?

LESSON 80

1. What is $\frac{5}{8}$ of $22?

2. Divide 382,104 by 6.

3. Multiply 684 by 796.

4. Divide 342,174 by 7.

5. Multiply 807 by 780.

6. Divide 293,006 by 7.

7. Reduce 254 gills to higher denominations.

8. Add 4876, 9453, 4873, 4659, 4837, 3726, and 9687.

9. If 1 seventh of a load of hay is worth $3.76, how much is half the other part worth?

10. How many 3-inch squares are there in a piece of paper two yards long and three feet wide?

11. A man bought a horse and carriage for $550, paying $275 for the horse. Find the cost of the carriage.

12. A man bought a watch for $75, which is four times as much as he paid for a chain. Find the cost of both.

LESSON 81

1. 9,801,247 – 3,002,858.

2. 8,000,423 – 4,357,664.

3. 7,732,000 – 3,734,155.

4. 9,587,561 – 6,728,793.

5. How many pecks are there in 597 quarts?

6. How many feet are there in twenty-eight rods?

7. At $3.35 apiece, what will three dozen hats cost?

8. From 34 gal. 2 qt. 1 gi. take 26 gal. 1 pt. 3 gi.

9. Add 2637, 3748, 4859, 6273, 7384, 8495, and 6475.

10. I sold land for $7460, which is $1540 less than I paid for it. Find the cost.

11. Find the number of square inches in a piece of paper seven feet long and eight inches wide.

12. Bought 276 bu. of potatoes at $.95 a bushel and sold them at a loss of $48. How much did I get for them?

1.

60	60	60	60	60	47	42	49	40	45
×5	6	7	8	9	2	2	2	10	10

2. A boy sold papers at 3 cents apiece for $12.60. How many did he sell?

3. Compare a 3-inch square with a square inch.

4. A man sold 5 sixths of his sheep and had 25 left. How many did he sell?

5. Compare a 2-inch square with a rectangle 6″ by 4″.

6. How much farther is it around a 4-inch square than around a 2-inch square?

7. $\frac{1}{3}+\frac{1}{6}$ $\frac{1}{2}-\frac{1}{3}$ $\frac{5}{6}+\frac{2}{3}$ $\frac{1}{3}-\frac{1}{6}$

8. If four yards of lace cost $3, how much would a lady have to pay for 10 yards?

9. 20 is $\frac{5}{6}$ of 25 is $\frac{5}{6}$ of 30 is $\frac{5}{6}$ of 35 is $\frac{5}{6}$ of

10. If a man sells berries at 6 cents a quart, how much will he receive for 650 quarts?

11. 50 yards are — feet. 180 feet are — yards.

12. If 3 eighths of a yard of silk costs 85 cents, how much is 3 fourths of a yard worth?

13. 15 is $\frac{5}{8}$ of 20 is $\frac{5}{8}$ of 25 is $\frac{5}{8}$ of 35 is $\frac{5}{8}$ of

14. At $2 a rod, what will it cost to build a fence around a garden 8 rods long and 7 rods wide?

15. If 6 men can do a piece of work in 6 days, in how many days can 4 men do it? 9 men? 12 men?

16. A piece of paper is 1 yard long and 5 inches wide. Into how many half-inch squares can it be divided?

17. In a rectangular solid 1 ft. by 6 in. by 4 in., how many half-inch cubes are in each row? How many rows are there in each layer? How many layers are there?

LESSON 82

1. Multiply 430 by 600.
2. Divide 156,244 by 4.
3. Multiply 867 by 958.
4. Divide 523,285 by 7.
5. Multiply 6489 by 920.
6. Divide 721,000 by 8.
7. Reduce 13 A. to sq. rd.
8. Divide 731,943 by 9.

9. How many square yards are there in 590 square feet?

10. Add $96, $8.59, $5.83, $.79, $7.95, $16, and $6.

11. At eight dollars an acre, how many acres of land can be bought for $3456?

12. If a man has $842 in his safe and $168.43 less in the bank, how much money has he?

13. Find the difference between two surfaces, one 48 feet square and the other containing 1264 square feet.

14. If $7.65 is 1 eighth of a man's money, how much can he spend and have 1 fourth of his money left?

LESSON 83

1. 9,300,000 – 4,443,624.
2. 6,892,741 – 3,897,965.
3. 7,521,332 – 3,021,709.
4. 6,155,664 – 5,396,018.

5. Add 7486, 9578, 6759, 9684, 5893, 7865, and 9487.

6. Add 43 bu. 1 pk., 36 bu. 6 qt., 42 bu. 3 pk. 2 qt., and 38 bu. 3 pk.

7. At eight cents a quart, what is the value of four bushels of chestnuts?

8. Find the area of a piece of ground 129 yards long and one-third as many yards wide.

9. A piece of land that cost $2800 was sold at a profit of $4650. How much was received for it?

10. At $1.15 a rod, how much will it cost to enclose a rectangular field 28 rods long and 21 rods wide?

1.	58	63	47	58	35	69	76	87	57	98
	+9	78	36	47	45	57	87	93	89	76

2. If 9 oranges cost 50 cents, how much would I have to pay for 3 dozen?

3. At 8 cents a yard, how much muslin costs $14?

4. What two forms can you make by uniting two rectangles, each 5 in. by 3 in.?

5. Compare an oblong 21″ by 3″ with a 3-inch square.

6. If a farmer sells hay at ten dollars a ton, how much does he receive for 9000 pounds?

7. What is the perimeter of a rectangle 8 in. by 3 in.?

8. If your mother buys 3 pints of milk a day, in how many days will she buy 6 gallons?

9. $26 × 10 $5.45 × 10 $.65 × 10 $35 × 10

10. How many times can a cup holding $\frac{3}{8}$ of a pint be filled from a can containing 3 quarts?

11. 38 is $\frac{1}{2}$ of   39 is $\frac{1}{2}$ of   37 is $\frac{1}{3}$ of   38 is $\frac{1}{3}$ of

12. A farmer sold 600 bushels of wheat and had 1 fourth as much left. How much did he raise?

13. Compare: 3 quarts with a gallon. 10 in. with 5 ft.

14. How many cubic inches are there in a board 5 feet long, 10 inches wide, and one inch thick?

15. 320 rods make 1 mile. 2 miles are — rods.

16. A man spent 4 fifths of his money for shoes and had 75 cents left. How much did the shoes cost?

17. A piece of ground is 80 yards long and 60 yards wide. How many square yards does it contain?

18. A square field is 40 rods on each side. How many times must a man walk around it to travel six miles?

120 [illegible]

LESSON 84

1. Divide 234,340 by 5. 2. Divide 453,215 by 7.

3. Divide 724,535 by 7. 4. Divide 606,008 by 8.

5. Reduce 918 dry quarts to higher denominations.

6. How much cheese, at 8 cents a pound, costs $36.64?

7. If half a yard of silk costs 85 cents, how much must a lady pay for 9½ yards?

8. A grocer sold 14½ bushels of potatoes at 35 cents a peck. How much did he get for them?

9. From a piece of ribbon containing 28 yd. 2 ft. a merchant sold 19 yd. 1 ft. 6 in. How much was left?

10. Add seventy-eight thousand ninety-three, 587,649, seven million forty-five thousand, 958,672, six hundred thousand eight hundred ninety-six, and 70,496.

LESSON 85

1. 9,566,240 – 3,682,762. 2. 9,794,381 – 8,968,523.

3. 8,676,731 – 4,980,058. 4. 7,000,000 – 1,317,505.

5. Reduce 16 sq. yd. 7 sq. ft. to square feet.

6. From 50 yd. 6 in. subtract 22 yd. 1 ft. 8 in.

7. Add 6273, 7384, 8495, 9562, 8769, 4353, and 4837.

8. Add 8 gal. 2 qt. 1 pt., 7 gal. 1 pt., 8 gal. 3 qt., 2 qt. 1 pt., and 7 gal. 3 qt. 1 pt.

9. A man earns $26.25 a week, and his son earns $\frac{2}{7}$ as much. How much do both earn?

10. How many square feet are there in a blackboard nine yards long and four feet wide?

11. A farmer sold two hundred sixteen barrels of apples at $2.65 a barrel. How much did he get for them?

1.	70	70	70	70	51	54	52	55	53	35
	×3	4	5	6	2	2	2	2	2	10

2. If three oranges cost 10 cents, how many 10 cents will 2 dozen cost?

3. Compare a 4-inch square with a rectangle 1′ by 8″.

4. Two pecks and 4 quarts of onions will cost how much at 60 cents a peck?

5. $\frac{5}{6}$ of 36 is $\frac{5}{6}$ of 42 is $\frac{5}{6}$ of 48 is $\frac{5}{6}$ of 54 is

6. When six eggs cost 25 cents, how many dozen can you buy for two dollars?

7. If six horses eat 8 bushels of oats in a week, how many bushels will 9 horses eat in a week?

EXERCISES IN ADDITION

8	4	6	7	6	6	7	7	9	7	7	8
6	5	5	9	3	6	6	5	1	8	3	6
8	7	8	5	7	4	7	8	9	4	6	3
4	5	1	8	8	3	2	8	5	8	5	8
6	9	7	6	4	7	5	2	9	6	8	3
6	6	5	5	9	5	6	5	8	5	9	8
4	6	7	8	8	8	6	8	4	6	2	5
6	9	8	6	8	1	3	6	7	4	8	6
5	8	8	2	5	5	8	6	9	6	8	7
7	9	6	7	7	7	8	2	6	9	5	4
2	6	9	6	9	8	7	7	8	7	6	7
4	9	6	3	6	4	8	5	9	6	4	4
5	7	3	9	8	5	7	5	5	3	8	8
3	5	8	3	5	7	6	7	9	8	4	5
a	*b*	*c*	*d*	*e*	*f*	*g*	*h*	*i*	*j*	*k*	*l*

LESSON 86

1. 857 × 968. **2.** 780 × 490. **3.** 3847 × 569.
4. 465 × 504. **5.** 867 × 975. **6.** 8700 × 840.

7. At 8 cents a quart, what costs 44 gal. of vinegar?

8. A man sold wool for $943 and gained $258.55. How much did he pay for it?

9. How many square yards are there in a pavement 261 feet long and four feet wide?

10. A farmer sold six cows at the same price for $504. How much did he receive per head?

11. A man had 95 sheep. He sold 7 for $26.25. At that price, what would he receive for his whole flock?

12. A man bought a house for $3600, which was 2 sevenths of his money. How much did he have left?

LESSON 87

1. 8,852,582 – 1,052,634. **2.** 5,442,172 – 1,391,769.
3. 6,700,000 – 5,904,324. **4.** 6,506,094 – 2,010,308.

5. At 4 cents an ounce, what cost $5\frac{1}{2}$ pounds of tea?

6. Reduce 293 liquid quarts to higher denominations.

7. Add 9876, 6789, 8967, 7896, 7698, 6987, and 5342.

8. A farmer sold 175 sheep, lost 68, and had 647 left. How many had he at first?

9. Add 27 gal. 2 qt. 3 gi., 29 gal. 3 qt. 1 pt., 26 gal. 1 qt. 1 pt. 1 gi., and 18 gal. 1 pt.

10. How many tiles one foot square are required to pave a hall 26 feet long and 12 feet wide?

11. A farmer put his wheat into 7 bins, putting 345 bushels into each bin. How many bushels did he have?

1. 65 44 53 78 84 69 49 77 87 68
+9 98 76 79 76 74 33 53 94 97

2. At six cents a quart, what is the value of a bushel and a peck of peanuts?

3. What is the perimeter of a 6-inch square?

4. How many bushels of oats will last a horse 6 weeks, if he eats a peck a day?

5. Compare a 2-inch square with a 4-inch square.

6. A man sold oranges at 30 cents a dozen for $1.65. How many dozen did he sell?

7. How many 5-cent postage stamps cost 8 dollars?

8. If a quarter of a pound of tea is worth 15 cents, how much will 2 pounds cost?

9. Compare an oblong $1'$ by $2''$ with a 2-inch square.

10. If 1 seventh of a piece of land is worth $60, how much is half the other part worth?

11. $\frac{1}{3} + \frac{5}{9}$ $\frac{5}{9} - \frac{1}{3}$ $\frac{1}{3} - \frac{2}{9}$ $\frac{2}{3} - \frac{4}{9}$

12. If a grocer is selling ~~10~~ 18 eggs for 25 cents, how much would I have to pay for 3 dozen?

13. 28 is $\frac{4}{5}$ of 32 is $\frac{4}{5}$ of 36 is $\frac{4}{5}$ of 40 is $\frac{4}{5}$ of

14. A rectangle contains 108 half-inch squares. If there are 9 rows, what are the dimensions?

15. $\frac{2}{3}$ of 4 is $\frac{3}{4}$ of 5 is $\frac{2}{5}$ of 6 is $\frac{3}{5}$ of 3 is

16. If a man is selling 3 quarts of berries for 25 cents, for how many quarts will he receive $2.75?

17. I bought a 25-cent ball for $\frac{1}{9}$ of my money. How many more can I buy and have $\frac{2}{3}$ of my money left?

18. In a rectangular solid 45 ft. by 32 ft. by 7 ft., how many cubic feet are in each row? How many rows are there in each layer? How many layers are there?

LESSON 88

1. 729 × 648. **2.** 678 × 964. **3.** 8473 × 960.

4. Find $\frac{7}{9}$ of 5922. **5.** Divide 4,321,072 by 8.

6. Add 2345, 3452, 4523, 5234, 6789, 7896, and 8967.

7. I bought 9 books at the same price for $14.85. What was the price of each?

8. A man paid $250 for a horse and $85 less for a carriage. Find the cost of both.

9. A house that cost $4725 was sold at a loss of $1075. How much was received for it?

10. At 85 cents a rod, how much will it cost to enclose a square field 19 rods on each side?

11. A man bought three hundred twenty acres of land at $7 an acre. He sold $\frac{3}{8}$ of it at $9 an acre and the remainder at $8 an acre. How much did he gain?

LESSON 89

1. 8,734,392 – 7,734,927. **2.** 7,000,000 – 6,351,302.

3. 9,553,527 – 3,746,648. **4.** 8,447,131 – 2,676,623.

5. Reduce 6 rods 12 feet 7 inches to inches.

6. From 42 bu. 2 pk. subtract 18 bu. 3 pk. 6 qt.

7. How many square yards are there in 434 square feet?

8. Each of seven barrels contains 35 gal. 2 qt. 1 pt. of oil. How much is there in all?

9. A square piece of tin is 12 feet 4 inches on each side. How many square inches does it contain?

10. A merchant's sales were $465 Monday, $457.48 Tuesday, $448 Wednesday, $512.72 Thursday, and $482 Friday. Find the amount of his sales for the five days.

1. 70 70 70 56 59 57 61 58 62 28
× 7 8 9 2 2 2 2 2 2 10

2. If you take 6 quarts of wheat out of a peck, what part of a peck is left?

3. Compare a 4-inch square with a 2-inch square.

4. How many square feet are there in a surface 24 feet long and 18 inches wide?

5. $\frac{1}{3}+\frac{2}{9}$ $\frac{2}{3}-\frac{1}{9}$ $\frac{1}{3}-\frac{1}{6}$ $\frac{5}{8}-\frac{1}{2}$

6. A sidewalk contains 360 square feet. If it is 20 yards long, how wide is it?

7. If 6 lemons cost 12 cents, what will 5 dozen cost?

8. If 1 fifth of a piece of land is worth $80, how much is half the remainder worth?

9. 30 is $\frac{2}{3}$ of 40 is $\frac{2}{3}$ of 50 is $\frac{2}{3}$ of 60 is $\frac{2}{3}$ of

10. A man sold 1 fourth of his farm and had 120 acres left. How many acres did he sell?

11. Compare a 4-inch square with a rectangle 16″ by 8″.

12. A merchant sold $3\frac{1}{3}$ yards of ribbon, which was 1 fourth of the piece. How much was left?

13. $\frac{2}{7}$ of 49 is $\frac{3}{7}$ of 21 is $\frac{4}{7}$ of 28 is $\frac{5}{7}$ of 35 is

14. What can you make by uniting two rectangles, one 7 in. by 5 in. and the other 7 in. by 6 in.?

15. 6 rods are — yards. 8 rods are — feet.

16. If a grocer buys berries at 8 cents a quart and sells them at 12 cents, how much does he gain on 80 qt.?

17. How many half-inch cubes are there in a block of wood 5 inches long, 3 inches wide, and 2 inches thick?

18. If 12 men can do a piece of work in $2\frac{1}{2}$ days, how many men can do it in 6 days? In 10 days? In 5 days?

LESSON 90

1. Divide 2,896,510 by 5.
2. Multiply 7468 by 839.
3. Divide 3,501,456 by 7.
4. Multiply 6407 by 578.
5. Divide 6,154,000 by 8.
6. Multiply 4367 by 849.
7. Reduce 319 dry quarts to higher denominations.
8. Add $.67, $9.43, $8.46, $7.58, $.85, and $4.65.
9. Add 36 yd. 7 in., 38 yd. 2 ft., 28 yd. 1 ft. 5 in., 35 yd. 2 ft., and 24 yd. 1 ft.
10. A merchant sold goods for $746 and gained $157.64. How much did they cost?
11. How many square yards are there in a piece of ground 48 yards long and 75 feet wide?
12. A grocer sold 8 gallons of molasses at the same price for $7.60. What was the price per gallon?

LESSON 91

1. 9,013,064 – 1,272,658.
2. 8,252,113 – 3,842,147.
3. 8,420,002 – 1,654,369.
4. 8,557,492 – 4,060,904.
5. At 15 cents an inch, what costs 4 yards of wire?
6. Add 6273, 3726, 7384, 3748, 8495, 4859, and 8796.
7. A has $426, which is $56.85 less than B has. How much money have both?
8. How many square feet are there in a floor 45 feet long and 34 feet 4 inches wide?
9. A farmer sold one hundred thirty-two sheep at $3.25 a head. How much did he receive for them?
10. Add ninety-seven million four, 546,398, six hundred seventy thousand eighty, 294,857, forty-five thousand seven hundred sixty-eight, and sixty million eighty.

1. If four yards of silk cost five dollars, how much must I pay for 20 yards?

2. Compare a 3-inch square with a 6-inch square.

3. How many bushels of potatoes will it take to give half a bushel to each of 19 men?

4. Compare an oblong 9″ by 6″ with a 3-inch square.

5. If a man cuts 15 oranges into quarters, to how many children can he give 3 pieces each?

6. $\frac{1}{4} + \frac{7}{8}$ $\frac{3}{4} - \frac{1}{8}$ $\frac{1}{2} + \frac{3}{4}$ $\frac{7}{8} - \frac{3}{4}$

7. A boy sold 70 quarts of berries at 8 cents a quart. How much did he receive for them?

8. 2 rods are — feet. 8 rods are — feet.

9. How many yards of fence will enclose a rectangular field 46 yards long and 34 yards wide?

10. $5.80 × 10 $8.70 × 100 $.86 × 10 $.94 × 100

11. If 35 pounds of sugar cost two dollars, how much would I have to pay for seven pounds?

12. Compare a 2-inch square with a rectangle 8″ by 4″.

13. A merchant sold half a yard of lace from a piece of four yards. What part of the piece was left?

14. What is the perimeter of a rectangle 8 in. by 5 in.?

15. If I divide some peaches equally among 6 boys and 3 girls, what part of them do the girls receive?

16. If 4 horses eat 9 bushels of oats in a week, how many bushels will 20 horses eat in the same time?

17. In a rectangle $2\frac{1}{2}$ ft. by 7 in., how many square inches in each row? How many rows are there?

18. In a rectangular solid 2 ft. by 10 in. by 6 in., how many 2-inch cubes in each row? How many rows are there in each layer? How many layers are there?

LESSON 92

1. Divide 5,059,200 by 6. 2. Multiply 4675 by 890.

3. Divide 2,606,835 by 7. 4. Multiply 9786 by 758.

5. Add $85, $9.45, $8.24, $78, $9.83, $.98, and $5.52.

6. A man has $84.50. How much more must he have to buy a horse worth $145?

7. A man spent $79.80 and had 5 ninths of his money left. How much did he have left?

8. A man bought land at $6 an acre for $960 and sold it at $9 an acre. How much did he gain?

9. How much sugar, at six cents a pound, will pay for 18 dozen eggs at twenty-four cents a dozen?

10. How many square feet are there in the walls of a room 14 feet long, 11 feet wide, and 9 feet high?

LESSON 93

1. Find $\frac{7}{8}$ of 64,072. 2. Divide 6,677,888 by 8.

3. Multiply 7986 by 697. 4. Divide 4,576,536 by 9.

5. Reduce 18 gal. 2 qt. 1 pt. 3 gi. to gills.

6. From 52 gal. 1 pt. subtract 17 gal. 2 qt. 2 gi.

7. Add 9876, 8769, 7698, 6987, 6789, 7896, and 8967.

8. A lady bought eighteen yards of silk at $2.35 a yard. How much did she pay for it?

9. How many square inches are there in a piece of paper six feet long and 44 inches wide?

10. If 1 third of a boy's money is $5.94, how much can he spend and have 5 ninths of his money left?

11. A miller sold 575 barrels of flour to one man, 686 barrels to another, 474 barrels to another, and had 963 barrels left. How many barrels had he at first?

1.	80	80	80	80	63	15	15	15	35	45
	× 2	3	4	5	2	3	4	5	2	2

2. At the rate of 6 marbles for a cent, how many can you buy for 30 cents?

3. Compare an oblong $1\frac{1}{2}'$ by $3''$ with a 3-inch square.

4. A boy sold chestnuts at 10 cents a quart for $6.40. How many bushels did he sell?

5. Compare: 4 in. with a foot. 4 in. with a yard.

6. If a merchant sells ribbon at 8 cents a yard, for how many yards does he receive $8.64?

7. 8 is $\frac{2}{7}$ of 8 is $\frac{4}{7}$ of 6 is $\frac{2}{9}$ of 8 is $\frac{2}{9}$ of

8. How many rods of fence will enclose a rectangular field 26 rods long and 14 rods wide?

9. $7.35 × 10 $5.45 × 100 $.95 × 10 $.76 × 100

10. Into how many square inches can you cut a rectangular piece of paper $2\frac{1}{2}$ ft. by 8 in.?

11. Compare: 6 in. with a foot. 6 in. with a yard.

12. A man earns $60 a month, which is 4 times as much as his son earns. How much do both earn?

13. Compare: 9 in. with a foot. 9 in. with a yard.

14. If $12 is 1 ninth of a man's money, how much can he spend and have 1 third of his money left?

15. $\frac{1}{2}$ of $\frac{1}{4}$ is $\frac{1}{2}$ of $\frac{1}{2}$ is $\frac{1}{2}$ of $\frac{1}{3}$ is $\frac{1}{2}$ of $\frac{2}{3}$ is

16. A garden is 20 rods square. How much fence will enclose it and divide it into 4 equal square parts?

17. A man sold 5 oranges to each of 8 girls and had half as many left. How many did he have at first?

18. How many cubic inches are there in a block of marble 18 inches long and 5 inches square at the ends?

LESSON 94

1. Divide 3,045,360 by 4. **2.** Multiply 9468 by 759.
3. Divide 3,921,589 by 7. **4.** Multiply 4658 by 638.
5. Divide 7,554,609 by 9. **6.** Multiply 5798 by 479.

7. Reduce four square yards to square inches.

8. Add $6.47, $5, $9.38, $.65, $8.58, $6, and $7.64.

9. A man sold land for $2650 and gained $575. How much did he pay for it?

10. A farmer sold sheep at $7 a head, receiving $1925 for them. How many did he sell?

11. How many half-inch squares can be cut from a sheet of paper two feet long and 18 inches wide?

12. A lady had $19.25. She spent $\frac{5}{7}$ of it for a cloak and the remainder for shoes. Find the cost of each.

LESSON 95

1. Multiply 7496 by 458. **2.** Divide 4,942,158 by 6.
3. Multiply 5974 by 796. **4.** Divide 5,321,540 by 7.
5. Find $\frac{2}{7}$ of $87\frac{1}{2}$ pounds. **6.** Divide 4,237,000 by 8.

7. How much sugar, at $.08 a pound, costs $50?

8. At 8 cents an ounce, what costs $8\frac{1}{2}$ pounds of mace?

9. Add 8293, 6475, 7384, 6295, 8462, 7968, and 4357.

10. Add 19 bu. 6 qt., 14 bu. 3 pk., 27 bu. 2 pk. 4 qt., 22 bu. 3 pk., and 25 bu. 6 qt.

11. If a man earns $125 a month and spends $80, how much will he save in three years?

12. How many square rods are there in a rectangular field 25 rods long and 18 rods wide?

13. A boy raised 678 quarts of berries, which he sold at 12 cents a quart. How much did he receive for them?

1. A merchant sold soap at five cents a cake for $10.25. How many cakes did he sell?

2. Compare a 6-inch square with a 3-inch square.

3. What two forms can you make by uniting two rectangles, each 6 in. by 3 in.?

4. Compare a 4-inch square with a rectangle 3′ by 4″.

5. If 9 pounds of sugar cost 50 cents, how many pounds can be bought for $2.50?

6. 12 is $\frac{3}{7}$ of   15 is $\frac{3}{7}$ of   18 is $\frac{3}{7}$ of   21 is $\frac{3}{7}$ of

7. If a man can do $\frac{1}{4}$ of some work in half a day, in how many days can he do the whole of it?

8. Compare: 5 qt. with a peck.   3 pk. with a bushel.

9. At $2 a rod, how much will it cost to build a fence around a rectangular garden 12 rods by 8 rods?

10. $\frac{1}{3} + \frac{5}{6}$ $\frac{1}{2} - \frac{1}{6}$ $\frac{1}{2} + \frac{2}{3}$ $\frac{2}{3} - \frac{1}{6}$

11. A rectangle contains 360 square inches. If there are 10 rows of squares, what are the dimensions?

12. $\frac{1}{3}$ of $\frac{1}{2}$ is $\frac{1}{3}$ of $\frac{3}{4}$ is $\frac{1}{3}$ of $\frac{3}{5}$ is $\frac{1}{3}$ of $\frac{3}{7}$ is

13. A boy had 75 cents and spent 1 third of it for oranges at 5 cents apiece. How many did he buy?

14. 4 rods are — yards.   4 rods are — feet.

15. If 6 men can do a piece of work in $3\frac{1}{3}$ days, in how many days can 10 men do it? 4 men? 2 men? 20 men?

STANDARD WEIGHTS

1 bu. of wheat = 60 lb.
1 bu. of corn = 56 lb.
1 bu. of oats = 32 lb.
1 bu. of barley = 48 lb.
1 bu. of potatoes = 60 lb.
1 barrel of flour = 196 lb.
1 barrel of pork = 200 lb.
1 keg of nails = 100 lb.

LESSON 96

1. Divide 7,384,225 by 5. 2. Multiply 6700 by 580.

3. Divide 4,521,349 by 7. 4. Multiply 8769 by 476.

5. Divide 4,638,752 by 8. 6. Multiply 5968 by 938.

7. How many rods are there in 8½ miles?

8. Add 7896, 8967, 9678, 6789, 7384, 4859, and 3465.

9. How much must be added to 38 bu. 3 pk. 4 qt. to make 54 bu. 3 pk.?

10. A man sold 84 sheep, which was 3 eighths of all he had. How many did he have left?

11. A lady bought 8 yards of silk for $7.84. If she buys 15 yards more, what will it all cost?

12. Find the difference between two surfaces, one 38 feet square and the other containing 784 square feet.

LESSON 97

1. Divide 5,781,000 by 8. 2. Multiply 8697 by 857.

3. Divide 7,384,563 by 9. 4. Multiply 9658 by 749.

5. Reduce 12 rd. 4 yd. 2 ft. 7 in. to inches.

6. From 62 yd. 7 in. subtract 24 yd. 2 ft. 8 in.

7. At $1.65 a rod, how much will it cost to enclose a rectangular field 62 rods long and 32 rods wide?

8. How many square feet are there in the walls and ceiling of a room 16 ft. long, 14 ft. wide, and 10 ft. high?

9. A merchant bought eight pieces of ribbon, each piece containing 16 yards 2 feet 6 inches. How many yards were there in the eight pieces?

10. A boy earned eighteen dollars. He spent $\frac{5}{8}$ of it for a suit of clothes and the remainder for a hat and shoes. How much did the hat and shoes cost?

1.	80	80	80	80	65	67	64	66	45	75
	×6	7	8	9	2	2	2	2	4	4

2. How much farther is it around a 9-inch square than around a 3-inch square?

3. What is the perimeter of a 7-inch square?

4. If 2½ dozen peaches cost 30 cents, how much would you have to pay for 75?

5. Compare a 3-inch square with a 9-inch square.

6. If you take half a gallon of milk out of 4 gallons, what part of the milk is left?

7. How large an oblong contains 24 square inches?

8. At eight cents a quart, how many quarts of strawberries can be bought for $12?

9. Compare an oblong 16″ by 8″ with a 4-inch square.

10. How long will 11 bushels 1 peck of potatoes last a family, if they eat three pecks a week?

11. 5 bushels are — quarts.   96 qt. are — bushels.

12. A man sold 45 sheep and had 1 fourth of his flock left. How many did he have at first?

13. 8 rods are — yards.   8 rods are — feet.

14. If a merchant sells 2 yards of ribbon for 75 cents, how much would he receive for 8 yards?

15. 12 is $\frac{4}{7}$ of   16 is $\frac{4}{7}$ of   20 is $\frac{4}{7}$ of   24 is $\frac{4}{7}$ of

16. How many inch cubes can be put into a box 1 foot long, 10 inches wide, and 7 inches deep?

17. What can you make by uniting two rectangles, one 8 in. by 7 in. and the other 6 in. by 8 in.?

18. In a rectangle 4 ft. by 17 in., how many half-inch squares are in each row? How many rows are there?

LESSON 98

1. Multiply 978 by 594. 2. Divide 4,775,052 by 6.

3. Multiply 6398 by 740. 4. Divide 2,657,060 by 7.

5. Reduce 565 dry quarts to higher denominations.

6. Add $75, $8.49, $8, $6.98, $.74, $64.86, and $67.

7. Add 3748, 7384, 8495, 4859, 5926, 9562, and 6374.

8. Find the cost of five and 1 half gross of pencils at four cents apiece.

9. A man paid $425 for a horse and $175 less for a carriage. Find the cost of both.

10. How many tiles 2 feet square are needed to pave a walk 48 yards long and 6 feet wide?

11. A builder sold five houses at the same price for $32,500. How much did he receive for each?

LESSON 99

1. 856 × 364. 2. 690 × 700. 3. 709 × 806.

4. 796 × 487. 5. 849 × 800. 6. 905 × 708.

7. How many sheets of paper are there in 16 quires?

8. A man bought 144 sheep at $4.75 a head. How much did he pay for them?

9. A man bought land at $6 an acre for $888 and sold it at $8.50 an acre. Find his gain.

10. Add 17 gal. 2 qt. 3 gi., 19 gal. 1 pt. 1 gi., 24 gal. 3 qt. 1 pt., 23 gal. 2 qt., and 16 gal. 1 pt.

11. Find the difference between two surfaces, one 4 feet square and the other containing 875 square inches.

12. A lady spent $6.85 for a hat, twenty-two dollars for a dress, $28 for a cloak, $1.65 for gloves, and had $48.47 left. How much did she have at first?

1. If three eggs cost five cents, how many dozen will cost two dollars?

2. Compare a 9-inch square with a 3-inch square.

3. A grocer sold soap at 6 cents a cake for $15. How many cakes did he sell?

4. Compare a 3-inch square with a rectangle 1′ by 6″.

5. At six cents a spool, how many spools of thread can be bought for thirty-three dollars?

6. $\frac{1}{7}$ of 6 is $5\frac{1}{3} = \frac{?}{3}$ $\frac{17}{4} = ?$ $\frac{3}{5}$ of 7 is

7. At the rate of 3 peaches for 5 cents, how much would you have to pay for 8 dozen?

8. 9 is $\frac{3}{8}$ of   12 is $\frac{3}{8}$ of.   15 is $\frac{3}{8}$ of   18 is $\frac{3}{8}$ of

9. A merchant paid $22.75 for tea at $\frac{1}{4}$ of a dollar a pound. How many pounds did he buy?

10. How many half-inch squares are there in a rectangular piece of paper 20 inches long and one foot wide?

DIVISION BY MORE THAN ONE FIGURE

```
9625(25
75   385
212
200
 125
 125
```

There are 3 25's in 96 and a remainder of 21, hence there are 300 25's in the number. Annex 2 to 21. There are 8 25's in 212 and a remainder of 12, hence there are 80 25's in the number. Annex 5 to 12. There are 5 25's in 125. Hence there are 385 25's in the whole number.

```
80640(21
63    3840
176
168
  84
  84
   0
```

```
8610000(28
84      307500
 210
 196
  140
  140
   00
```

```
874690(23
69     38030
184
184
   69
   69
    0
```

LESSON 100

1. 9681 ÷ 21.
2. 4914 ÷ 21.
3. 1798 ÷ 31.
4. 7020 ÷ 30.
5. 7440 ÷ 31.
6. 7854 ÷ 22.

7. How many square feet are there in a walk 45 yards long and 4 feet 4 inches wide?

8. A merchant sold 6 pairs of shoes at the same price for $ 27. Find the price per pair.

9. A grocer made a profit of $ 85.75 on tea and coffee, which he sold for $ 643. How much did it cost?

10. A farmer sold potatoes weighing 2100 pounds at 65 cents a bushel. How much did he get for them?

11. A grocer bought 4050 pounds of cheese at 8 cents a pound. He sold $\frac{5}{9}$ of it at 9 cents a pound and the remainder at $9\frac{1}{2}$ cents a pound. How much did he gain?

LESSON 101

1. Divide 5187 by 21.
2. Multiply 68,534 by 759.
3. Divide 7518 by 21.
4. Multiply 78,054 by 487.
5. Divide 4960 by 31.
6. Multiply 59,638 by 639.

7. Reduce fourteen pounds twelve ounces to ounces.

8. Fourteen pairs of gloves cost $ 18.90. What was the cost of each pair?

9. A has $ 834, which is $ 73.85 less than B has. How much money have both?

10. Add 8 gal. 2 qt., 17 gal. 1 pt., 19 gal. 3 qt. 1 pt., 9 gal. 2 qt., and 7 gal. 1 pt.

11. A grocer sold 285 barrels of flour at $ 4.35 a barrel. How much did he receive for it?

12. At 40 cents a bushel, how much will a farmer receive for a load of oats weighing 2192 pounds?

1. 68 57 38 46 57 66 57 85 75 99
+9 69 45 24 38 78 88 79 88 87

2. If three pounds of rice cost 25 cents, how much would 27 pounds cost?

3. Compare a 4-inch square with an 8-inch square.

4. At $1.60 a bushel, how much would I have to pay or a half-peck of onions?

5. What is the perimeter of a rectangle 10″ by 5″?

6. At 5 cents a quart, for how many bushels of berries does a man receive $4.80?

7. At 4 cents a pound, what do 8 kegs of nails cost?

8. A man sold 5 eighths of his land and had 75 acres left. How much did he sell?

9. $\frac{1}{2}+\frac{7}{8}$ $\frac{2}{3}-\frac{4}{9}$ $\frac{1}{2}+\frac{2}{3}$ $\frac{5}{6}-\frac{2}{3}$

10. A boy spent 5 ninths of his money and had 60 cents left. How much did he spend?

11. Compare a rectangle 6″ by 4″ with a 2-inch square.

12. I paid $75 for 3 acres of land. At the same price, how many acres could I buy for $225?

13. What part of 3 fourths is as large as 1 eighth?

14. At 6 cents a yard, for how many yards of ribbon will a merchant receive thirty-nine dollars?

15. $\frac{2}{3}$ of 33 is $\frac{2}{3}$ of 36 is 24 $\frac{2}{3}$ of 60 is $\frac{2}{3}$ of 75 is

16. A rectangle contains 210 half-inch squares. If there are 7 rows, what are the dimensions?

17. Harry raised berries and sold them at 7 cents a quart for $14.56. How many quarts did he raise?

18. In a rectangular solid 10 ft. long and 9 in. square at the ends, how many cubic inches in each row? How many rows in each layer? How many layers are there?

LESSON 102

1. 709 × 600. **2.** 6724 ÷ 41. **3.** 29,295 ÷ 31.

4. 487 × 960. **5.** 8670 ÷ 51. **6.** 28,728 ÷ 42.

7. A man has $86.85. How much more must he have to buy a carriage for $185?

8. How many cubic feet of air are there in a room 9 ft. long, 7 ft. wide, and 8 ft. high?

9. How many cubic inches are there in a block of wood 8 in. long, 6 in. wide, and 4 in. thick?

10. The ceiling of a room is 19 ft. long and 4 yd. wide. How many square feet does it contain?

11. How many cubic inches are there in a block of marble 2 ft. long, 18 in. wide, and 1 ft. thick?

12. How many cubic inches are there in a block of wood 18 inches long, 9 inches wide, and 7 inches thick?

LESSON 103

1. Divide 10,248 by 61. **2.** Multiply 46,035 by 47.

3. Divide 45,440 by 71. **4.** Multiply 64,738 by 59.

5. Multiply 14 yards two feet eight inches by six.

6. I bought 335 acres of land at thirty-five dollars an acre. How much did it cost?

7. How many 2-inch squares are there in a piece of paper 8 yards long and four feet wide?

8. How many cubic feet of water are there in a cistern 12 ft. long and 9 ft. wide, if the water is 7 ft. deep?

9. How many cubic inches are there in a stick of timber 4 feet long and 6 inches square at the ends?

10. Sold land for $5750 and lost $1250. How much would I have received for it, if I had gained $1250?

1.	90	90	90	90	68	72	69	71	25	16
	×2	3	4	5	2	2	2	2	5	3

2. If 4 pounds of cheese cost 75 cents, how many pounds can I buy for $3?

3. What is the entire surface of an inch cube?

4. A man sold 9 acres of land at $25 an acre. How much did he receive for it?

5. Compare an 8-inch square with a 4-inch square.

6. A man sold 1 fourth of his farm and had 180 acres left. How many acres did he sell?

7. At 9 cents a pound, what do 3 barrels of pork cost?

8. A farmer sold 4 sevenths of his wheat and had 180 bushels left. How many bushels did he sell?

9. $\frac{1}{3}+\frac{1}{6}$ $\frac{1}{2}-\frac{1}{3}$ $\frac{5}{6}-\frac{2}{3}$ $\frac{1}{3}-\frac{1}{6}$

10. When eggs are selling at the rate of 18 for 25 cents, how much would you have to pay for 6 dozen?

11. $45 × 10 $65 × 100 $6.55 × 10 $8.75 × 10

12. What two forms can you make by uniting two oblongs, each 9 inches long and 4½ inches wide?

13. Compare a 4-inch square with a rectangle 2′ by 4″.

14. If 20 acres is 1 ninth of a man's farm, how many acres can he sell and have 2 thirds of his farm left?

15. Two rods are — feet. Six rods are — feet.

16. A milkman sold milk at 5 cents a quart and received $35 for it. How many quarts did he sell?

17. How many half-inch cubes are there in a 5-in. cube?

18. A piece of ground is 80 yards by 4 yards. How many square yards in each row? How many rows?

19. If 9 men can do a piece of work in 3⅓ days, how many men can do it in 5 days? In 6 days? In 15 days?

LESSON 104

1. Divide 16,929 by 81. 2. Multiply 7468 by 579.

3. Divide 53,874 by 82. 4. Multiply 7900 by 685.

5. Reduce 215 inches to higher denominations.

6. Divide 47 gal. 1 pt. 2 gi. by 5. 7. 86,450 ÷ 91.

8. A man bought land at $14 an acre for $4480. How many acres did he buy?

9. How many square yards are there in a lawn 180 feet long and 135 feet wide?

10. A earns $46 a week, which is eight times as much as B earns. How much do both earn?

11. How many cubic feet of air are there in a room 24 feet long, 18 feet wide, and 12 feet high?

12. If 1 ninth of a piece of land is worth $875, how much is half the remainder worth at the same price?

LESSON 105

1. Find $\frac{5}{8}$ of 4800. 2. Divide 23,680 by 32.

3. Multiply 789 by 897. 4. Divide 54,348 by 42.

5. Multiply 4586 by 406. 6. Divide 12,978 by 42.

7. If each of nine men dig 17 bu. 3 pk. of potatoes, how many will all dig?

8. Add 9 yd. 2 ft., 7 yd. 9 in., 8 yd. 1 ft. 8 in., 9 yd. 1 ft., and 17 yd. 2 ft. 10 in.

9. If a man's salary is $1850 and he spends three-fifths of it, how much does he save?

10. Find the number of cubic inches in a block one yard long and nine inches square at the ends.

11. A man sold a farm for $4800, which is 3 fifths as much as he paid for it. How much did he lose?

1.	90	90	90	90	24	32	72	40	26	65
	×6	7	8	9	5	5	4	10	10	10

2. If a grocer is selling 15 eggs for 40 cents, how much must I pay for 5 dozen?

3. What is the entire surface of a 2-inch cube?

4. How many 2-inch squares are there in a rectangle 50 inches long and one foot wide?

5. Compare: 1000 lb. with a ton. 500 lb. with a ton.

6. At eighteen dollars a ton, how much must a man pay for three thousand pounds of hay?

7. Compare: 9 in. with a yard. 18 in. with a yard.

8. What two forms can you make by uniting 3 rectangles, each 9 inches long and 3 inches wide?

EXERCISES IN ADDITION

9	9	6	8	7	8	4	6	8	8	8	9
7	9	7	4	6	4	6	8	9	6	7	4
9	4	8	7	9	9	7	7	7	8	5	8
2	8	8	7	7	4	8	4	6	4	8	5
8	8	5	9	7	6	9	3	5	8	9	6
6	8	6	2	4	8	5	6	4	6	5	7
9	7	7	3	9	9	4	6	8	9	8	8
3	6	5	9	2	2	6	4	4	7	7	3
8	5	9	9	8	8	8	5	6	6	8	7
5	8	4	9	9	3	4	9	9	6	4	6
8	5	6	6	8	4	5	6	5	8	7	8
9	7	7	8	7	7	6	8	7	7	8	7
8	9	7	5	4	6	9	9	8	8	9	6
7	8	9	9	8	9	5	7	7	9	9	8
a	*b*	*c*	*d*	*e*	*f*	*g*	*h*	*i*	*j*	*k*	*l*

LESSON 106

1. Divide 25,234 by 62. **2.** Divide 33,604 by 62.

3. Multiply 678 by 876. **4.** Divide 56,880 by 72.

5. Multiply 3648 by 607. **6.** Divide 32,544 by 72.

7. Change 374 dry quarts to higher denominations.

8. From 24 gal. 2 qt. 1 pt. subtract 16 gal. 3 qt. 3 gi.

9. Add $49.38, $68.50, $.64, $9.83, $64, and $5.47.

10. How much must be added to 43 bu. 3 pk. 4 qt. to make 63 bu. 2 pk.?

11. How many half-inch squares are there in a sheet of paper 2 yards long and 8 inches wide?

12. How many cubic inches of water does a pan hold that is 7 ft. long, 4 ft. wide, and 15 in. deep?

13. A man sold a load of potatoes weighing 1920 pounds at 85 cents a bushel. How much did he get for them?

LESSON 107

1. Divide 352,600 by 82. **2.** Multiply 9768 by 470.

3. Divide 460,644 by 92. **4.** Multiply 5697 by 589.

5. Reduce 8 sq. yd. 15 sq. ft. to square inches.

6. Add 4259, 7385, 4372, 7843, 2695, 4644, and 9798.

7. Multiply 27 bu. 2 pk. 7 qt. by 7. **8.** 48,064 ÷ 16.

9. A man worked thirty-eight days and received $2.75 a day. How much did he earn?

10. I lost $75 by selling a horse for 7 eighths of the cost. How much did I get for the horse?

11. A farmer sold 2548 pounds of corn at 48 cents a bushel. How much did he receive for it?

12. A man bought a house for $4750 and land for 3 times as much, less $2250. How much did both cost?

1. At sixty cents a pound, how much does 6 pounds and 8 ounces of tea cost?

2. What is the perimeter of an 8-inch square?

3. At 25 cents a half-yard, how much would I have to pay for $4\frac{1}{2}$ yards of ribbon?

4. What is the entire surface of a 3-inch cube?

5. A boy spent 3 fifths of his money and had 80 cents left. How much did he spend?

6. Compare a half-inch square with a square inch.

7. In a month a boy sold papers at 4 cents apiece for $36.32. How many did he sell?

8. What part of 3 fourths is as large as 3 eighths?

9. If $\frac{1}{8}$ of a yard of velvet is worth 40 cents, how much is 3 fourths of a yard worth?

10. How many cubic inches are there in a 9-inch cube?

11. If 3 eighths of an acre of land is worth $45, how much is 3 fourths of an acre worth?

12. $\frac{1}{8}$ of a bushel is $\frac{1}{2}$ of $\frac{1}{2}$ of a foot is $\frac{1}{6}$ of

13. How many cubic feet of water are there in a cistern 10 feet square, if the water is 8 feet deep?

14. At $4\frac{1}{2}$ cents a pound, what do 6 kegs of nails cost?

15. A man bought 40 sheep at $3 a head and sold them at $3.75 a head. How much did he gain?

16. What can you make by uniting two rectangles, one 9 in. by 3 in. and the other 9 in. by 2 in.?

17. If a grocer is selling 3 pounds of crackers for 25 cents, how much must be paid for 27 pounds?

18. A rectangle contains 160 2-inch squares. If there are 8 rows, what are the dimensions of the rectangle?

LESSON 108

1. Divide 9756 by 18. 2. Divide 127,680 by 19.

3. Multiply 587 by 807. 4. Divide 444,150 by 63.

5. Reduce 1638 square inches to higher denominations.

6. Divide 70 yd. 2 ft. 8 in. by 8. 7. 657,438 ÷ 73.

8. Nine tons of coal cost $43.65. How much did it cost per ton?

9. I paid $275 for a horse and $188 less for a carriage. Find the cost of both.

10. Find the number of cubic feet of air in a room 38 ft. long, 26 ft. wide, and 18 ft. high.

11. How many square inches are there in a piece of ribbon nine yards long and three inches wide?

12. A man bought sheep at $6 a head, paying $750 for them, and sold them at $7.25 a head. Find the gain.

LESSON 109

1. Find $\frac{7}{8}$ of 348,608. 2. 564,400 ÷ 83.

3. Multiply 7463 by 896. 4. 431,256 ÷ 84.

5. Reduce 18 rd. 14 ft. to feet. 6. 372,837 ÷ 93.

7. At 28 cents a quart, what costs 48 gal. of molasses?

8. Add 24 bu. 2 pk. 7 qt., 9 bu. 6 qt., 17 bu. 3 pk. 5 qt., 1 pk. 4 qt., and 9 bu. 3 pk.

9. I sold wool for $4732 and lost $648. How much would I have received for it, if I had gained $468?

10. How many cubic inches are there in a block of stone 4 feet long, 3 feet wide, and 30 inches thick?

11. A lady spent $7.75 for a hat, twenty-eight dollars for a dress, $14.75 for a cloak, $1.75 for gloves, and had $57.85 left. How much money did she have at first?

1. At 6 cents a quart, for how many quarts of berries will a man receive $12.54?

2. What is the entire surface of a 4-inch cube?

3. If a horse eats 8 quarts of oats a day, how many bushels will last him 80 days?

4. Compare a square inch with a half-inch square.

5. If a lady cuts $3\frac{1}{2}$ pies into sixths, to how many children can she give a piece?

6. Compare: $\frac{1}{2}$ with $\frac{5}{8}$ $\frac{1}{2}$ with $\frac{1}{8}$ $\frac{1}{2}$ with $\frac{3}{4}$

7. How many yards of fence will enclose a rectangular field 57 yards long and 33 yards wide?

8. $\frac{1}{3}+\frac{5}{9}$ $\frac{5}{9}-\frac{1}{3}$ $\frac{1}{3}-\frac{2}{9}$ $\frac{2}{3}-\frac{4}{9}$

9. If a man's salary is $150 a month and he spends $\frac{2}{3}$ of it, how much does he save in 8 months?

10. At 10 cents a pound, what cost 8 barrels of pork?

11. A boy bought 80 marbles for 24 cents. At the same price, how many would cost 18 cents?

12. What is the perimeter of a rectangle $7\frac{1}{2}''$ by $4\frac{1}{2}''$?

13. If a man can do 1 sixth of some work in half a day, in how many days can he do the whole of it?

14. $\frac{1}{4}$ of a bushel is $\frac{1}{2}$ of $\frac{1}{9}$ of a yard is $\frac{1}{3}$ of

15. A farmer sold 5 eighths of his wheat and had 180 bushels left. How many bushels did he sell?

16. Compare: $\frac{1}{3}$ with $\frac{4}{9}$ $\frac{1}{3}$ with $\frac{1}{9}$ $\frac{1}{3}$ with $\frac{1}{2}$

17. In a rectangle 8 ft. by 3 ft., how many 2-inch squares are in each row? How many rows are there?

18. $\frac{1}{3}+\frac{1}{9}$ $\frac{4}{9}-\frac{1}{3}$ $\frac{2}{3}-\frac{2}{9}$ $\frac{1}{3}-\frac{1}{9}$

19. In a rectangular solid 5 ft. by 10 in. by 8 in., how many half-inch cubes are in each row? How many rows are there in each layer? How many layers are there?

LESSON 110

1. Multiply 879 by 987. 2. Divide 50,320 by 74.

3. Divide 167,462 by 74. 4. Divide 67,956 by 84.

5. Multiply 4638 by 782. 6. Divide 85,258 by 94.

7. Change 1644 inches to higher denominations.

8. Add $49, $128.46, $76, $4.95, $.87, and $75.84.

9. At 75 cents a bushel, what is the value of a carload of barley weighing 31,200 pounds?

10. How many cubic inches of water will a pan hold that is a yard long, 18 in. wide, and 7 in. deep?

11. A man divided 12 gal. 1 qt. 1 pt. of milk equally among 9 families. How much did each receive?

12. A grocer made a profit of $74.86 on tea and coffee, which he sold for $432. How much did he pay for it?

LESSON 111

1. Multiply 465 by 879. 2. Divide 68,510 by 85.

3. Multiply 4863 by 375. 4. Divide 46,645 by 95.

5. Multiply 18 gal. 3 qt. 1 pt. 2 gi. by 9.

6. Reduce 75 cubic yards 16 cubic feet to cubic feet.

7. Add 7384, 8473, 6295, 9562, 7869, 4352, and 8495.

8. At 85 cents a bushel, what is the value of a load of potatoes weighing 2280 pounds?

9. At $1.75 a rod, how much will it cost to fence a square field sixteen rods on each side?

10. If $4.85 is 1 ninth of a man's money, how much can he spend and have 1 third of his money left?

11. A man bought 168 sheep at $5 a head. He sold $\frac{4}{7}$ of them at $6 and the others at $7 a head. Find his gain.

1.	25	25	25	15	15	25	35	45	24	36
	×6	9	8	4	5	7	4	4	5	5

2. A grocer sold sugar at 6 cents a pound for $54.48. How much did he sell?

3. What is the perimeter of a 9-inch square?

4. How many square inches are there in a sheet of paper 3 feet 4 inches square?

5. Compare a 4-inch square with a square foot.

6. If nine pounds of sugar cost 50 cents, how many pounds can you buy for $2.50?

7. Compare: $\frac{1}{9}$ with $\frac{1}{3}$ $\frac{2}{3}$ with $\frac{1}{6}$ $\frac{1}{9}$ with $\frac{2}{3}$

8. How many weeks will 8 bu. 3 pk. of oats last a horse, if he eats 8 quarts a day?

9. $\frac{1}{4}$ of a bushel is $\frac{1}{3}$ of $\frac{1}{3}$ of a yard is $\frac{1}{2}$ of

10. At the rate of 15 for 25 cents, how much would you have to pay for $7\frac{1}{2}$ dozen oranges?

11. $\frac{1}{7}$ of 28 in. is $\frac{1}{3}$ of $\frac{1}{2}$ of 18 in. is $\frac{1}{4}$ of

12. How many half-inch squares are there in a rectangle 3 ft. 4 in. long and $8\frac{1}{2}$ in. wide?

13. Compare: $\frac{1}{6}$ with $\frac{1}{3}$ $\frac{2}{3}$ with $\frac{1}{9}$ $\frac{1}{6}$ with $\frac{1}{2}$

14. How many cubic feet of air are there in a room 15 feet long, 10 feet wide, and 8 feet high?

15. $\frac{1}{8}$ of 32 in. is $\frac{1}{8}$ of $\frac{1}{2}$ of a foot is $\frac{1}{6}$ of

16. If a man sells 3 fourths of a yard of ribbon from a piece of 3 yards, what part of the piece is left?

17. A field is 25 rods square. How many rods of fence will enclose it and divide it into 4 equal fields?

18. If 12 men can do a piece of work in $2\frac{1}{2}$ days, in how many days can 5 men do it? 3 men? 2 men? 6 men?

LESSON 112

1. Multiply 879 by 435. 2. Divide 618,831 by 87.
3. Divide 646,076 by 76. 4. Divide 523,740 by 86.
5. Multiply 7384 by 698. 6. Divide 461,320 by 76.
7. Add 2368, 7465, 6387, 4286, 8429, 5624, and 5746.

8. Goods that cost $1632 were sold at a loss of $267. How much was received for them?

9. How many cubic inches are there in a block of marble 4 feet long and 6 inches square at the ends?

10. At 75 cents a bushel, how much will a man receive for 2 loads of potatoes, each load weighing 2160 pounds?

11. A merchant cut a piece of ribbon, containing 17 yards and 1 foot, into eight pieces of equal length. What was the number of yards in each piece?

LESSON 113

1. Find $\frac{3}{5}$ of $71\frac{1}{4}$ pounds. 2. Divide 253,407 by 77.
3. Multiply 6089 by 573. 4. Divide 528,960 by 87.
5. Reduce 4 sq. yd. 86 sq. ft. to square feet.

6. If a man sells 17 gal. 2 qt. 1 pt. of milk a day, how much does he sell in a week?

7. Harry has 98 marbles, which is 78 less than his brother has. How many have both?

8. How many inch cubes are there in a block one yard long, 18 inches wide, and 8 inches thick?

9. Add 17 gal. 1 pt. 3 gi., 9 gal. 3 qt. 1 pt., 1 pt. 2 gi., 3 qt. 3 gi., 18 gal. 1 pt., and 8 gal. 3 qt. 3 gi.

10. If 1 ninth of a piece of land is worth $775, how much is half the remainder worth at the same price?

LESSON 114

1. Divide 379,688 by 48. **2.** Multiply 5846 by 780.

3. Divide 355,047 by 87. **4.** Multiply 4837 by 965.

5. Divide 645,337 by 77. **6.** Multiply 6570 by 758.

7. Divide 600,430 by 97. **8.** Multiply 7900 by 680.

9. From 116 bu. subtract 48 bu. 2 pk. 6 qt.

10. Change 3216 square inches to higher denominations.

11. Add $72.14, $167.06, $9.94, $.78, $8.75, and $67.

12. How many square feet are there in a floor 28 feet long and 18 feet 3 inches wide?

13. Find the number of cubic feet of air in a room 28 feet long, 18 feet wide, and 13 feet high.

14. A man bought 32 bushels of potatoes at the same price for $20.80. How much did they cost per bushel?

LESSON 115

1. 8,820,000 – 3,731,205. **2.** 8,356,775 – 4,846,789.

3. 4,820,007 – 1,081,758. **4.** 4,562,372 – 3,777,605.

5. Reduce 64 lb. 13 oz. to ounces. **6.** 464,464 ÷ 58.

7. Multiply 46 yd. 2 ft. 10 in. by 9. **8.** 275,400 ÷ 68.

9. Add 8436, 4743, 5879, 3896, 9657, 4985, and 4867.

10. If 28 barrels of flour cost $130.20, how much will forty-five barrels cost?

11. At $1.65 a rod, how much will it cost to enclose a square field 24 rods on each side?

12. How many cubic feet of water are there in a cistern 12 feet square, if the water is 7 feet deep?

13. A man paid $265 for a carriage and three times as much for a span of horses. Find the cost of both.

LESSON 116

1. Multiply 758 by 492. 2. Divide 53,040 by 68.

3. Divide 101,048 by 68. 4. Divide 53,742 by 78.

5. Divide 423,521 by 88. 6. Divide 59,840 by 88.

7. Multiply 7864 by 978. 8. Divide 57,526 by 98.

9. At $24 apiece, how many coats will cost $1320?

10. Divide 79 gal. 3 qt. by 8. 11. 548,760 ÷ 68.

12. Add 8435, 4786, 7384, 4859, 7362, 8765, and 6879.

13. A man sold 46 sheep at the same price for $211.60. What was the price per head?

14. How many square yards of oilcloth are required to cover a floor 24 ft. long and 18 ft. wide?

15. How many cubic inches are there in a stick of timber one yard long and one foot square at the ends?

LESSON 117

1. 7,725,431 – 1,080,905. 2. 8,100,002 – 3,163,429.

3. 4,579,864 – 1,750,868. 4. 5,859,253 – 1,429,257.

5. Reduce 26 rods 4 yards 1 foot to feet.

6. At $4.75 apiece, how much do 324 books cost?

7. Add 27 yd. 9 in., 18 yd. 3 ft., 2 ft. 11 in., 19 yd. 2 ft. 9 in., 2 ft. 8 in., and 16 yd. 1 ft.

8. A farmer sold 7 ninths of his wheat and had 156 bushels left. How much did he sell?

9. Find the number of cubic feet of air in a room 13 feet long, 9 feet wide, and 8 feet high.

10. A man lost $1475 on a farm, which he sold for $8225. How much would he have received for it, if he had sold it at a profit of seven hundred eighty dollars?

1.	49	68	44	37	64	78	89	57	46	97
	+9	27	55	48	75	97	74	88	97	86

2. How many gallons of milk will it take to give a quart to each of 60 men?

3. Compare a square foot with a 4-inch square.

4. At 35 cents a peck, how much would I have to pay for $2\frac{1}{2}$ bushels of potatoes?

5. What is the entire surface of a 5-inch cube?

6. A boy gave away $3\frac{1}{2}$ apples, which was $\frac{1}{3}$ of all he had. How many did he have left?

7. Compare: $\frac{1}{3}$ with $\frac{5}{9}$ $\frac{4}{9}$ with $\frac{2}{3}$ $\frac{1}{3}$ with $\frac{1}{6}$

8. What two forms can you make by uniting two rectangles, each 8 inches by 3 inches?

9. Compare a 4-inch square with a rectangle 3′ by 4″.

10. A man sold 7 coats for $175. At the same price, how much will he receive for 9 coats?

11. $3\frac{1}{2}$ feet are — inches. 180 feet are — yards.

12. A boy lost 4 sevenths of his marbles and had ninety left. How many did he have at first?

13. $.65 × 10 $.85 × 100 $3.86 × 10 $6.28 × 100

14. A man paid $45 for a harness and 9 times as much for a horse and carriage. Find the cost of all.

15. What is the perimeter of a rectangle $12\frac{1}{2}''$ by $7\frac{1}{2}''$?

16. If a piece of paper contains 540 sq. in. and there are 9 rows, what are the dimensions of the rectangle?

17. A farmer drew to market 3 tons of wheat, which he sold at 85 cents a bushel. How much did he get for it?

18. In a rectangular solid 2 yd. by 2 ft. by 1 ft., how many cubic inches are in each row? How many rows are there in each layer? How many layers are there?

LESSON 118

1. Divide 15,010 by 19.
2. Divide 94,480 by 19.
3. Divide 86,374 by 19.
4. Divide 24,329 by 27.
5. Divide 16,820 by 29.
6. Divide 26,130 by 39.
7. Reduce 742 dry quarts to higher denominations.
8. Add $19.48, $.96, $7.83, $84, $43.76, and $8.58.
9. A man sold potatoes at $1.75 a barrel for $77. How many barrels did he sell?
10. A floor is 27 ft. long and 19 ft. 4 in. wide. How many square yards does it contain?
11. How many cubic inches are there in a block of marble 2 ft. long, 16 in. wide, and 9 in. thick?
12. From a barrel containing 43 gal. 2 qt. of molasses, a grocer sold 24 gal. 3 qt. 1 pt. How much was left?

LESSON 119

1. 9,000,477 – 3,315,478.
2. 7,000,231 – 6,570,453.
3. 6,086,350 – 3,006,372.
4. 9,004,452 – 2,006,866.
5. Find $\frac{5}{6}$ of $55\frac{1}{4}$ square feet.
6. 140,009 ÷ 28.
7. Multiply 18 bu. 2 pk. 7 qt. by 9.
8. 493,822 ÷ 49.
9. Change 2 cu. yd. 865 cu. in. to cubic inches.
10. At $.95 a bushel, what cost 650 bushels of wheat?
11. If 34 yards of silk cost $59.50, how many yards can be bought for $154?
12. At 38 cents a bushel, how much will a farmer receive for 6576 pounds of oats?
13. A man lost $85.64 on fruit, which he sold for $274.52. How much would he have received for it, if he had gained sixty-four dollars forty-eight cents?

LESSON 120

1. Multiply 9870 by 789. 2. Divide 40,542 by 59.

3. Multiply 6908 by 709. 4. Divide 31,533 by 69.

5. Divide 71 yd. 9 in. by 9. 6. Divide 55,537 by 79.

7. Change 4785 sq. in. to higher denominations.

8. If a man's salary is $ 2235 and he spends $ 965, how much does he save in 3 years?

9. How many 3-inch squares are there in a piece of paper two yards long and 2 ft. 6 in. wide?

10. A man bought wool at $ .24 a pound for $ 2040 and sold it at $ .28 a pound. How much did he gain?

11. How many inch cubes can be put into a box 28 inches long, 17 inches wide, and 13 inches deep?

12. A farmer divided 14 bu. 3 pk. 4 qt. of potatoes equally among seven men. Find each man's share.

LESSON 121

1. 7,610,000 – 6,613,026. 2. 6,063,424 – 1,078,679.

3. 9,058,152 – 4,058,489. 4. 3,027,351 – 2,040,705.

5. Reduce 4 sq. yd. 42 sq. in. to square inches.

6. Add 19 bu. 7 qt., 3 pk. 6 qt., 18 bu. 2 pk. 5 qt., 1 pk. 7 qt., 7 bu. 3 pk. 6 qt.

7. Find the number of cubic inches in a block one yard long, 8 in. wide, and 6 in. thick.

8. A merchant sold 278 yards of muslin at eight cents a yard. How much did he receive for it?

9. A man paid $ 785.68 for fruit and sold it for $ 187 more than he paid for it. How much did he get for it?

10. A man bought land at $ 26 an acre for $ 4160. How much will he gain, if he sells it at $ 32 an acre?

LESSON 122

1. Divide 190,304 by 38.
2. Divide 118,490 by 18.
3. Multiply 6745 by 659.
4. Divide 112,537 by 19.
5. Multiply 4289 by 456.
6. Divide 143,640 by 19.
7. From 112 yd. 2 ft. subtract 47 yd. 8 in.
8. At $1.25 a bushel, how much wheat will cost $5500?
9. At 8 cents a pound, how much beef will cost $214?
10. Find the number of square inches in a piece of paper 7 feet long and 8 inches wide.
11. At 75 cents a bushel, what is the value of 3 loads of potatoes, each load weighing 2340 pounds?
12. A farmer raised six hundred thirty-four bushels of corn in one field and 245 bushels less in another field. How many bushels did he raise in both fields?

LESSON 123

1. 9,030,843 – 3,030,845.
2. 8,056,581 – 4,075,674.
3. 5,320,000 – 4,583,502.
4. 9,802,471 – 1,007,663.
5. Change 4 acres 50 square rods to square rods.
6. Multiply 19 bu. 7 qt. by 8.
7. 187,590 ÷ 37.
8. At $1.85 a rod, how much will it cost to enclose a square field 24 rods on each side?
9. How many 3-inch cubes are there in a block of wood 2 feet long, 9 inches wide, and 6 inches thick?
10. A merchant sold 7 pieces of silk, each piece containing 27 yd. 2 ft. 6 in. How many yards did he sell?
11. A man spends $285 of his salary for board, $175 for clothes, $140 for other expenses, and has six hundred fifty dollars left. How much is his salary?

1. A man sold vinegar at 8 cents a quart for $24.64. How many quarts did he sell?

2. What is the perimeter of a ten-inch square?

3. At 10 cents a pound, how much will you have to pay for $3\frac{1}{4}$ pounds of beefsteak?

4. What is the entire surface of a 6-inch cube?

5. If a family use 3 pounds of tea in 7 weeks, how many pounds will last 35 weeks?

6. Compare a 2-inch square with a 3-inch square.

7. What two forms can you make by uniting two rectangles, each 9 inches by $4\frac{1}{2}$ inches?

8. Compare: $\frac{1}{2}$ with $\frac{7}{8}$ $\frac{1}{2}$ with $\frac{1}{4}$ $\frac{3}{8}$ with $\frac{1}{2}$

9. At $1.50 a rod, how much will it cost to enclose a rectangular field 32 rods by 18 rods?

10. $\frac{1}{3}$ of $\frac{1}{3}$ is $5\frac{3}{4} = \frac{?}{4}$ $\frac{17}{3} = ?$ $\frac{1}{3}$ of 4 is

11. A man sold 5 sixths of his apples at $3 a barrel for $75. How many barrels did he keep?

12. $\frac{1}{6}$ is $\frac{1}{2}$ of $\frac{1}{8}$ is $\frac{1}{4}$ of $\frac{1}{9}$ is $\frac{1}{3}$ of $\frac{1}{8}$ is $\frac{1}{2}$ of

13. If a man works for $1.50 a day of 10 hours, how much does he receive for 7 hours' work?

14. $36 × 10 $3.75 × 10 $.75 × 10 $4.85 × 10

15. At 5 cents a quart, for how many quarts of strawberries will a man receive eight dollars?

16. Compare: $\frac{1}{8}$ with $\frac{1}{4}$ $\frac{3}{4}$ with $\frac{1}{8}$ $\frac{1}{8}$ with $\frac{1}{2}$

17. How many cubic feet of water does a cistern hold that is 10 feet long, 8 feet wide, and 6 feet deep?

18. If 7 horses eat 16 bushels of oats in a week, how many bushels will 14 horses eat in the same time?

19. In a rectangle 3 ft. by 14 in., how many half-inch squares are in each row? How many rows are there?

LESSON 124

1. 879 × 476. **2.** 16,472 ÷ 29. **3.** 22,040 ÷ 38.

4. 786 × 879. **5.** 26,942 ÷ 38. **6.** 18,525 ÷ 39.

7. 469 × 435. **8.** 24,310 ÷ 39. **9.** 22,620 ÷ 39.

10. Change 851 inches to higher denominations.

11. Add 4728, 2437, 5783, 3698, 7465, 9578, and 7594.

12. When eighteen yards of silk cost $29.52, what is the price per yard?

13. How many 2-inch cubes are there in a piece of marble 18 in. long, 16 in. wide, and 8 in. thick?

14. A man sold $\frac{7}{9}$ of his wheat and had 168 bu. left. Find the value of his whole crop at 84 cents a bushel.

15. A man sold his farm for $9250, which is $1675 more than he paid for it. What would he have received for it, if he had lost eight hundred seventy-five dollars?

LESSON 125

1. 6,950,303 − 2,080,956. **2.** 8,975,861 − 1,305,865.

3. 6,925,000 − 5,984,241. **4.** 7,504,513 − 6,803,947.

5. Find $\frac{5}{6}$ of $46\frac{1}{2}$ gallons. **6.** 273,234 ÷ 39.

7. Reduce 12 rd. 3 yd. 2 ft. to feet. **8.** 531,059 ÷ 59.

9. Add $78.59, $66, $17.49, $97, $8.69, and $66.74.

10. If nine pounds of tea cost $5.85, how many pounds can be bought for $30.55?

11. A man bought thirty-eight acres of land for $4560. How much did it cost per acre?

12. Find the number of cubic inches in a block 2 feet long, one foot wide, and 9 inches thick.

13. Add 15 gal. 2 qt. 1 pt., 16 gal. 1 pt. 3 gi., 8 gal. 3 qt. 2 gi., 9 gal. 1 pt. 3 gi., and 1 gal. 1 qt. 1 pt.

LESSON 126

1. Divide 27,881 by 49. 2. Multiply 7980 by 476.
3. Divide 53,277 by 59. 4. Multiply 9436 by 708.
5. Divide 48,714 by 69. 6. Multiply 4657 by 679.

7. A miller bought 7644 pounds of corn at 65 cents a bushel. Find the cost of it.

8. What is the area of a piece of ground 129 yards long and one-third as many yards wide?

9. A farmer sold thirty-two bushels of wheat for $27.20. How much did he receive per bushel?

10. How many cubic feet of masonry are there in a wall 65 feet long, 9 feet high, and one yard thick?

11. A man bought a farm for $4800, which was 3 sevenths of his money. How much did he have left?

LESSON 127

1. 9,461,807 – 3,467,018. 2. 8,423,601 – 7,865,903.
3. 9,740,531 – 3,692,474. 4. 8,781,551 – 2,195,678.
5. What number is $\frac{5}{8}$ of 6152? 6. 105,203 ÷ 49.
7. Multiply 18 yd. 2 ft. 9 in. by 8. 8. 393,960 ÷ 49.

9. Change 84 cubic yards 16 cubic feet to cubic feet.

10. How many cubic feet of air are there in a room 14 feet square and 9 feet high?

11. A man sold two hundred sixty-five sheep at $3.75 a head. How much did he receive for them?

12. How many square yards of paper will cover the walls of a room 16 ft. long, 13 ft. wide, and 9 ft. high?

13. If a farmer receives $986 for his wheat and $275 less for his potatoes, how much does he receive for both?

LESSON 128

1. Multiply 736 by 498.
2. Divide 29,972 by 59.
3. Multiply 8754 by 438.
4. Divide 51,000 by 68.
5. Divide 74 gal. 2 gi. by 6.
6. Divide 26,703 by 69.
7. Reduce 57,266 cu. in. to higher denominations.
8. Add 6273, 7384, 8495, 2637, 3748, 4859, and 6978.
9. A grocer bought butter at 23 cents a pound for $110.40. How much did he buy?
10. At 68 cents a bushel, what is the value of a load of potatoes, if it weighs 2370 pounds?
11. How many pounds of sugar, at 6 cents a pound, will pay for 144 eggs at 24 cents a dozen?
12. A man bought land at $7 an acre for $1120 and sold it at $8.50 an acre. How much did he gain?

LESSON 129

1. 6,250,562 – 5,449,569.
2. 6,100,007 – 1,664,328.
3. 2,680,444 – 1,910,678.
4. 8,569,110 – 1,700,704.
5. Reduce 8 square rods 16 sq. yd. to square feet.
6. What is the value of twenty-six barrels of potatoes at $2.65 a barrel?
7. A man earns $26.25 a week, and his son earns $\frac{2}{7}$ as much. How much do both earn?
8. Add 15 yd. 2 ft., 16 yd. 8 in., 17 yd. 2 ft. 9 in., 8 yd. 11 in., 3 ft. 7 in., and 8 yd. 2 ft. 6 in.
9. How many 2-inch cubes are there in a block of granite 4 feet long, 3 feet wide, and 2 feet thick?
10. A man worked 28 days at $2.75 a day, and bought a suit of clothes for $23.75. How much did he have left?

1.	25	15	48	35	45	15	35	75	75	45
	×5	5	2	2	2	4	3	2	4	10

2. How much farther is it around a square foot than around a 4-inch square?

3. What is the entire surface of a 7-inch cube?

4. At ~~18~~ 16 cents a pound, how much would I have to pay for $2\frac{3}{4}$ pounds of meat?

5. Compare a 3-inch square with a 2-inch square.

6. If a rectangle contains 160 2-inch squares and it is 16 inches wide, how long is it?

7. Compare: $\frac{1}{3}$ with $\frac{7}{9}$ $\frac{2}{9}$ with $\frac{2}{3}$ $\frac{2}{9}$ with $\frac{1}{3}$

8. How many half-inch squares are there in a rectangle 15 inches long and 4 inches wide?

9. $6.40 × 10 $5.80 × 100 $.48 × 10 $.74 × 100

10. What two forms can you make by uniting two rectangles, each 13 inches by $3\frac{1}{2}$ inches?

11. Compare a 3-inch square with a rectangle $1\frac{1}{2}'$ by $3''$.

12. How many bushels of oats will last a horse 8 weeks and 4 days, if he eats 8 quarts a day?

13. Compare: $\frac{1}{3}$ with $\frac{5}{6}$ $\frac{1}{3}$ with $\frac{8}{9}$ $\frac{2}{3}$ with $\frac{5}{6}$

14. If a grocer is selling 7 pounds of sugar for 30 cents, how many pounds could I buy for $1.80?

15. 6 rods are — yards. 6 rods are — feet.

16. A boy paid 45 cents for a ball and had 4 sevenths of his money left. How much did he have left?

17. At $2.50 a rod, how much will it cost to fence a rectangular field 22 rods long and 18 rods wide?

18. How many cubic inches are there in a block of wood 5 feet long, 8 inches wide, and 5 inches thick?

LESSON 130

1. 789 × 546. 2. 45,600 ÷ 75. 3. 36,182 ÷ 79.

4. 584 × 760. 5. 58,625 ÷ 88. 6. 69,153 ÷ 89.

7. Change 5584 sq. in. to higher denominations.

8. Add 4478, 5246, 2487, 7532, 9768, 5698, and 2967.

9. From 42 sq. yd. 7 sq. ft. 78 sq. in. subtract 28 sq. yd. 8 sq. ft. 96 sq. in.

10. If a merchant sells 111 yards of silk in equal parts to 6 ladies, how much does each buy?

11. A farmer sold potatoes at 75 cents a bushel for $630. How many bushels did he sell?

12. If a man sells 32 thousand pounds of hay at eighteen dollars a ton, how much will he receive for it?

13. A miller bought 57,900 pounds of wheat at eighty-five cents a bushel. How much did he pay for it?

LESSON 131

1. 8,803,704 – 3,003,716. 2. 7,465,683 – 6,584,689.

3. 8,200,001 – 7,731,503. 4. 9,324,235 – 2,748,659.

5. Change 4 rods 12 feet to feet. 6. 253,440 ÷ 99.

7. Multiply 19 bu. 3 pk. 7 qt. by 7. 8. 623,040 ÷ 88.

9. A lady bought 24 yards of silk for $42. How much would 65 yards cost at the same price?

10. A grocer bought 24 bu. 3 pk. 4 qt. of potatoes of each of 6 men. How many did he buy?

11. How many cubic feet of water will a cistern hold that is 24 ft. long, 18 ft. wide, and 12 ft. deep?

12. A man sold a piece of land for $7250, which is $2575 less than he paid for it. How much would he have received for it, if he had gained $1875?

LESSON 132

1. 895 × 758. **2.** 98,074 ÷ 78. **3.** 74,536 ÷ 79.

4. 586 × 567. **5.** 63,223 ÷ 79. **6.** 35,442 ÷ 99.

7. How many cubic inches are there in a cube of marble 45 inches on each edge?

8. How many square yards are there in a pavement 261 feet long and four feet wide?

9. A man bought 45 sheep at a uniform price, paying $168.75 for them. Find the price per head.

10. At $2.85 a rod, how much will it cost to fence a rectangular field 42 rods long and 36 rods wide?

11. A man bought books at $3 apiece, paying $195 for them, and sold them at $5 apiece. Find his gain.

12. Bought 360 sheep at $4 a head. Sold $\frac{3}{5}$ of them at $4.75 a head and the others at $5.25. Find the gain.

LESSON 133

1. 8,690,001 – 1,004,367. **2.** 7,590,150 – 6,096,051.

3. 7,221,861 – 2,280,865. **4.** 9,836,114 – 2,147,348.

5. Reduce 5 cubic yards 12 cu. ft. to cubic feet.

6. What cost 9 bu. of berries at 14 cents a quart?

7. How many cubic inches are there in a 14-in. cube?

8. Add 9785, 4657, 7438, 3426, 4345, 7938, and 7548.

9. Add 8 bu. 2 pk. 1 qt., 6 bu. 1 pk. 7 qt., 8 bu. 3 pk. 3 qt., 2 pk. 5 qt., and 7 bu. 1 pk.

10. A boy bought 3 bushels of peanuts at $1.85 a bushel and sold them at 5 cents a pint. Find his gain.

11. A merchant sold some goods for eight hundred ninety-six dollars and lost $164.43. How much would he have gained, if he had sold them for $1238?

LESSON 134

1. Multiply 5964 by 876. 2. Divide 191,080 by 281.

3. Multiply 6947 by 685. 4. Divide 229,804 by 292.

5. Divide 2,992,379 by 383. 6. Divide 275,232 by 376.

7. From 114 gal. 2 qt. subtract 46 gal. 2 qt. 1 pt.

8. At $2.25 a yard, how many yards of silk cost $54?

9. Find the number of cubic inches in a stone 4 ft. long, 3 ft. wide, and 4 in. thick.

10. How many tiles 1 foot square will be required to pave a hall 25 ft. long and 12 ft. wide?

11. Frank earned $17 in a month, which is $8.75 more than Harry earned. How much did both boys earn?

12. A boy sold chestnuts at twelve cents a quart, receiving $6.48 for them. If he bought them at eight cents a quart, how much did he gain?

LESSON 135

1. 8,132,173 – 4,258,585. 2. 5,000,001 – 4,317,503.

3. 9,516,481 – 2,706,486. 4. 7,543,245 – 6,797,489.

5. Multiply 28 sq. yd. 5 sq. ft. 118 sq. in. by 6.

6. What will 68 yards of silk cost at $1.35 a yard?

7. Change 8 square rods 42 square feet to square feet.

8. Add 6273, 7384, 8495, 5948, 4837, 3726, and 8769.

9. How many cubic inches are there in a block of wood 2 yd. long and 8 inches square at the ends?

10. A farmer sold 7 ninths of his potatoes and had 186 bushels left. How many bushels did he sell?

11. A man bought 320 acres of land at $17 an acre. He sold 3 eighths of it at $9 an acre and the remainder at $24 an acre. How much did he gain or lose?

1. What two forms can you make by uniting 3 oblongs, each 9 inches by 3 inches?

2. What is the entire surface of an 8-inch cube?

3. If a horse eats 8 quarts of oats a day, how many bushels will last him 120 days?

4. What is the perimeter of a square 15 inches long?

5. A merchant bought 2 coats for $50. At the same price, how much would 9 coats cost?

6. Compare: $\frac{1}{8}$ with $\frac{3}{4}$ $\frac{1}{4}$ with $\frac{3}{8}$ $\frac{5}{8}$ with $\frac{3}{4}$

7. If a grocer is selling 20 eggs for 25 cents, how many dozen could you buy for $2.25?

8. $4.65 × 10 $6.84 × 100 $.65 × 10 $.35 × 100

9. If a rectangle contains 600 half-inch squares and is 15 inches long, how wide is it?

10. 14 is $\frac{7}{8}$ of 21 is $\frac{7}{8}$ of 18 is $\frac{6}{7}$ of 24 is $\frac{6}{7}$ of

11. If a man can do $\frac{1}{8}$ of some work in half a day, in how many days can he do the whole of it?

12. Compare: $\frac{3}{8}$ with $\frac{3}{4}$ $\frac{1}{4}$ with $\frac{1}{8}$ $\frac{1}{4}$ with $\frac{5}{8}$

13. I bought a sack of potatoes weighing 180 pounds at 80 cents a bushel. How much did they cost?

14. $\frac{1}{2}$ of 2 feet is $\frac{1}{3}$ of $\frac{1}{6}$ of a yard is $\frac{1}{2}$ of

15. A boy gathered chestnuts and sold them at 10 cents a quart for $12.80. How many bushels did he sell?

16. How many half-inch cubes are there in a piece of slate 40 inches long, 15 inches wide, and 1 inch thick?

17. A merchant sold half a yard of ribbon from a piece of 4 yards. Compare the part sold with the part left.

18. If 16 men can do a piece of work in $2\frac{1}{2}$ days, how many men can do it in 8 days? In 4 days? In 10 days?

LESSON 136

1. Multiply 9768 by 689. **2.** 356,964 ÷ 394.

3. Divide 264,480 by 580. **4.** 222,592 ÷ 592.

5. Divide 150 bu. 1 pk. 7 qt. by 9. **6.** 408,000 ÷ 480.

7. A man sold 64 sheep at a uniform price for $ 288. What was the price per head?

8. How many bushels of oats will last 8 horses 96 days, if each horse eats 8 quarts a day?

9. How many cubic feet of air are there in a room 45 ft. long, 34 ft. wide, and 18 ft. high?

10. A boy has a cord 15 yd. 1 ft. 4 in. long. How much must he add to it to make it 32 yards long?

11. A speculator bought potatoes at 65 cents a bushel, paying $ 44.20 for them. How much would they have cost, if he had paid 85 cents a bushel?

LESSON 137

1. Divide 142,149 by 49. **2.** 679,776 ÷ 291.

3. Multiply 4986 by 576. **4.** 187,325 ÷ 295.

5. Find $\frac{2}{5}$ of 29 bu. 1 pk. 4 qt. **6.** 278,952 ÷ 394.

7. Reduce 18 rods 4 yards to feet. **8.** 321,974 ÷ 458.

9. From 72 yd. 10 in. subtract 27 yd. 1 ft. 11 in.

10. Add 14 sq. yd. 8 sq. ft. 126 sq. in., 26 sq. yd. 86 sq. in., and 19 sq. yd. 7 sq. ft. 76 sq. in.

11. A man sold 2658 pounds of butter at 24 cents a pound. How much did he receive for it?

12. If $ 7.45 is 1 ninth of a man's money, how much can he spend and have 2 thirds of his money left?

13. How many 2-inch cubes are there in a block of marble 2 feet long, 18 inches wide, and 12 inches thick?

LESSON 138

1. Multiply 576 by 780.
2. Divide 236,901 by 389.
3. Divide 134,784 by 288.
4. Divide 510,000 by 680.
5. Divide 140,530 by 299.
6. Divide 978,453 by 189.
7. Reduce 242,475 cu. in. to higher denominations.
8. Add $58.43, $7.65, $.78, $8.74, $6.45, and $86.
9. A man sold 48 bushels of potatoes for $36.48. What was the price per bushel?
10. At $1.85 a rod, how much will it cost to fence a square field 36 rods on each side?
11. A merchant bought silk at $1.35 a yard for $114.75 and sold it at $1.80 a yard. Find his gain.
12. A miller sold flour for two thousand four hundred twenty-three dollars and gained $436.72. How much would he have received for it, if he had lost $84?

LESSON 139

1. Multiply 798 by 647.
2. Divide 345,940 by 490.
3. Divide 219,429 by 387.
4. Divide 482,560 by 580.
5. Divide 162,373 by 397.
6. Divide 190,244 by 398.
7. Multiply 47 gallons 3 quarts 1 pint by nine.
8. Change eight acres 75 square rods to square rods.
9. A man earns $132 a month, and his son earns $84 less. How much do both earn?
10. At $16 a ton, how much will a man receive for twenty-five thousand pounds of hay?
11. A man spent 2 ninths of his money for a watch and had $168 left. How much did the watch cost?
12. A has 148 sheep. B has three times as many as A, less eighty-four, and C has as many as A and B together, less sixty-eight. How many sheep have all?

LESSON 140

1. 3947 × 659. 2. 658 × 847. 3. 2658 × 956.
4. 4739 × 478. 5. 479 × 965. 6. 3794 × 748.
7. 4856 × 596. 8. 586 × 784. 9. 6908 × 708.

10. Divide 130,720 by 190. 11. Divide 741,039 by 39.
12. Divide 673,180 by 388. 13. Divide 476,068 by 68.
14. Divide 210,374 by 398. 15. Divide 552,240 by 78.
16. Divide 271,026 by 478. 17. Divide 376,940 by 87.
18. Divide 278,964 by 492. 19. Divide 475,260 by 89.
20. Divide 338,142 by 498. 21. Divide 287,496 by 99.
22. Divide 475,600 by 580. 23. Divide 35,243 by 188.
24. Divide 624,923 by 689. 25. Divide 56,317 by 199.

26. Add 6273, 3748, 8495, 5926, 4837, 8796, and 4867.

27. Add 4857, 9362, 5649, 7458, 6394, 5729, and 8697.

28. If the perimeter of a rectangular field is 96 rods and it is 29 rods long, how wide is it?

29. How many square yards are there in a piece of ground 48 yards long and 75 feet wide?

30. A man bought 150 acres of land for $7650 and sold it at $65 an acre. How much did he gain?

31. How many 3-inch cubes are in a block of wood 27 inches long, 12 inches wide, and 9 inches thick?

32. A speculator bought potatoes at $.65 a bushel for $2600 and sold them at $.74 a bushel. Find his gain.

33. At $1.10 a rod, it cost $105.60 to enclose a square field. Find the perimeter and the length of each side.

34. A man sold 3 fifths of his land at $28 an acre and had 186 acres left. How much did he get for what he sold?

LIQUID MEASURE

4 gills	= 1 pint	pt.
2 pints	= 1 quart	qt.
4 quarts	= 1 gallon	gal.

DRY MEASURE

2 pints	= 1 quart	qt.
8 quarts	= 1 peck	pk.
4 pecks	= 1 bushel	bu.

LINEAR MEASURE

12	inches	= 1 foot	ft.
3	feet	= 1 yard	yd.
5½	yards, or 16½ feet	= 1 rod	rd.
320	rods, or 5280 feet	= 1 mile	mi.

SQUARE MEASURE

144	square inches	= 1 square foot	sq. ft.
9	square feet	= 1 square yard	sq. yd.
30¼	square yards	= 1 square rod	sq. rd.
272¼	square feet		
160	square rods	= 1 acre	A.

AVOIRDUPOIS WEIGHT

16	ounces	= 1 pound	lb.
100	pounds	= 1 hundredweight	cwt.
2000	pounds	= 1 ton	T.

CUBIC MEASURE

1728	cubic inches	= 1 cubic foot	cu. ft.
27	cubic feet	= 1 cubic yard	cu. yd.
128	cubic feet	= 1 cord	cd.

STANDARD WEIGHTS

1 bushel of wheat	= 60 lb.	1 bushel of potatoes	= 60 lb.
1 bushel of corn	= 56 lb.	1 barrel of flour	= 196 lb.
1 bushel of oats	= 32 lb.	1 barrel of pork	= 200 lb.
1 bushel of barley	= 48 lb.	1 keg of nails	= 100 lb.

TABLES

LINEAR MEASURE

12 inches (in.)	= 1 foot	ft.
3 feet	= 1 yard	yd.
5½ yards, or 16½ feet	= 1 rod	rd.
40 rods	= 1 furlong	fur.
320 rods	= 1 mile	mi.

1 mi. = 320 rd. = 1760 yd. = 5280 ft. = 63,360 in.

A *hand*, used in measuring the height of horses, = 4 in. A *knot*, used in measuring distances at sea, = 1.15 mi. A *fathom*, used in measuring the depth of the sea, = 6 ft.

SQUARE MEASURE

144 square inches (sq. in.)	= 1 square foot	sq. ft.
9 square feet	= 1 square yard	sq. yd.
30¼ sq. yd., or 272¼ sq. ft.	= 1 square rod	sq. rd.
160 square rods	= 1 acre	A.
640 acres	= 1 square mile	sq. mi.

1 A. = 160 sq. rd. = 4840 sq. yd. = 43,560 sq. ft.

A Section of land is a square mile.

Roofing, flooring, and slating are often estimated by the *square*, which contains 100 square feet.

SURVEYORS' MEASURE

In measuring land, surveyors use a chain (ch.) which contains 100 links (l.) and is 4 rods long. Since the chain is 4 rods long, a square chain contains 16 sq. rd., and 10 sq. ch. = 160 sq. rd., or 1 acre.

CUBIC MEASURE

1728 cubic inches (cu. in.)	= 1 cubic foot	cu. ft.
27 cubic feet	= 1 cubic yard	cu. yd.
128 cubic feet	= 1 cord	cd.
16 cubic feet	= 1 cord ft.	cd. ft.
8 cord feet	= 1 cord	cd.

NOTE. — In computing the contents of an enclosing wall, masons and brick-layers regard it as one straight wall whose length is the distance around it on the outside. Corners are thus measured twice.

A *perch* of stone or masonry is 16½ ft. long, 1½ ft. thick, and 1 ft. high, and contains 24¾ cu. ft.

96
1/25

MEASURES OF CAPACITY

LIQUID MEASURE

4 gills = 1 pint . . . pt.
2 pints = 1 quart . . . qt.
4 quarts = 1 gallon . . gal.

DRY MEASURE

2 pints = 1 quart . . qt.
8 quarts = 1 peck . . pk.
4 pecks = 1 bushel . . bu.

The *standard gallon* contains 231 cubic inches.
The *standard bushel* contains 2150.42 cubic inches.

The capacity of cisterns, reservoirs, etc., is often expressed in barrels (bbl.) of 31½ gallons each, or in hogsheads (hhd.) of 63 gallons each. In commerce, these vary in size.

AVOIRDUPOIS WEIGHT

16 ounces (oz.) . . . = 1 pound . . . . . . lb.
100 pounds . . . . . . = 1 hundredweight . . cwt.
2000 pounds . . . . . . = 1 ton . . . . T.

One pound Avoirdupois = 7000 grains.

The *long ton* of 2240 pounds is used in the United States Custom Houses and in weighing coal and iron at the mines.

STANDARD WEIGHTS

1 bushel of wheat . . . = 60 lb.
1 bushel of corn . . . = 56 lb.
1 bushel of oats . . . = 32 lb.
1 bushel of barley . . . = 48 lb.

1 bushel of potatoes . = 60 lb.
1 barrel of flour . . . = 196 lb.
1 barrel of pork . . . = 200 lb.
1 keg of nails . . . . = 100 lb.

TROY WEIGHT

24 grains (gr.) . . . . . = 1 pennyweight . . pwt.
20 pennyweights . . . . = 1 ounce . . . . . . oz.
12 ounces . . . . = 1 pound . . . . . lb.

One pound Troy = 5760 grains.

APOTHECARIES' WEIGHT

60 grains (gr.) . . . . . = 1 dram . . . dr., or ʒ.
8 drams . . . . = 1 ounce . . . oz., or ℥.
12 ounces . . . . = 1 pound . . . lb., or ℔.

One pound Apothecaries' weight = 5760 grains.

BRITISH OR STERLING MONEY

4 farthings . . . . . . = 1 penny . . . . . . *d.*
12 pence . . . . = 1 shilling . . . . . . *s.*
20 shillings . . . . = 1 pound . . . . . . £.
5 shillings . . . . = 1 crown.

The value of £1 is $4.8665 in United States gold coin.

The unit of French money is 1 franc, which is 19.3 cents. The unit of German money is 1 mark, which is 23.8

24 sheets . . .
240 lbs . . . .